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ABSTRACT

This report updates progress made by the Missouri state's system of higher education toward the attainment of 24 goals established in 1992 and reaffirmed in 1996. Each goal statement includes an indication of its associated value (access, quality, efficiency) and notes if it is related to the Funding for Results initiative. Also provided for each goal is a brief history and analysis of its current status, often including charts and tables. The 24 goals address the following concerns: the recommended high school curriculum, advanced placement opportunities, underrepresented groups and minority student participation and success, prospective school teachers, remedial education, enrollment at public four-year colleges and universities, admissions recommendations by admission category, success rates of entering freshmen, geographic access to postsecondary technical education, student transfer, employment of minorities in Missouri higher education, degree program assessment, graduation rates, degree productivity from selected disciplines, assessment in the major field of study, national recognition of graduate and professional programs, changes in funded positions by employment category, faculty workload, student financial aid, performance-based funding recommendations, instructional and research equipment and facilities, accountability reports, operating and capital funding recommendations, and governance. Several appendices further amplify the report and an attachment summarizes campus teaching/learning improvement projects (DB)

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1999 Report on Progress Toward the Statewide Public Policy Initiatives and Goals for Missouri Higher Education

Blueprint for the Future of Missouri Higher Education

April 15, 1999

Blueprint for the Future of Missouri Higher Education

During its October 12, 1995 meeting, the Coordinating Board for Higher Education (CBHE) adopted four strategic initiatives that, together, comprise the state system of higher education's blueprint for the future. Those initiatives include institutional mission review, enhanced postsecondary technical education, coordinated telecommunications-based delivery of instruction, and performance-based funding. In addition, universal access to the 13th and 14th years of education and a commitment to a seamless system of K-16 education were added as strategic initiatives by the CBHE in 1997. Associated with the blueprint is this annual report of the progress the state's system of higher education is making toward the attainment of the statewide goals and public policy initiatives adopted by the Coordinating Board in 1992 and reaffirmed in 1996 as part of the board's *Blueprint for Higher Education*.

As appropriate, several measures used in monitoring the institutions' performance in meeting these goals are included as part of the board's Funding for Results (FFR), or performance-based, budget recommendations. FFR elements included in the budget recommendations are selected based on discussions among the leadership of the state's colleges and universities and the Coordinating Board. All FFR elements are drawn from the board's broader set of performance measures included in the CBHE's statewide goals and public policy initiatives.

Context for the Coordinating Board's Statewide Goals and Public Policy Initiatives

An appropriate context for the board's progress report is the vision and desirable characteristics for the system of higher education adopted as part of the board's public policy initiatives and goals. That vision, which continues to provide a framework for the board's public policy decisions, is as follows.

> ***In order to secure their collective futures, the citizens of Missouri need a postsecondary system of public and independent colleges and universities and private vocational and career schools, that is distinguished by the following characteristics:***
>
> - **higher education and vocational training services of the highest quality that are truly competitive on a national and international level;**

- **a range of vocational, academic, and professional programs that are affordable and accessible to all citizens with the preparation and ability to benefit from the programs;**

- **differentiated institutional missions and implementation plans both among and within sectors designed to meet state needs and goals with a minimum of program duplication; and**

- **a systematic demonstration of institutional performance and accountability through appropriate assessment efforts.**

This vision statement was developed after a review of statewide needs reported by numerous study groups, including the Business Alliance for Quality Education, Battelle Corporation, Civic Progress in St. Louis, Confluence St. Louis and Kansas City Consensus, Governor's Advisory Council on Literacy, Jobs for Missouri's Future, Inc., Missouri Business and Education Partnership Commission, Missourians for Higher Education, Missouri State Council on Vocational Education, as well as the Coordinating Board for Higher Education.

The statewide needs for higher education that were identified by the Task Force on Critical Choices for Missouri Higher Education, and included by the CBHE in its public policy initiatives and goals, include the following:

For Missouri higher education to assist in securing Missouri's future, its system of public, independent, and private vocational postsecondary education needs to:

- **raise aspirations and expectations for high academic achievement and for the quality of instruction and learning;**

- **remove barriers for economically and educationally disadvantaged students, particularly minorities and citizens in rural areas;**

- **assist and encourage improvement in the quality and effectiveness of elementary and secondary education and continually enhance the quality of new teachers;**

- **improve the quality and effectiveness of undergraduate education, particularly in general education;**

- **strengthen graduate education and research;**

- **strengthen the delivery of postsecondary vocational programs;**

- **encourage the delivery system in raising the level of adult literacy, recognizing that the system needs to be better coordinated and adequately funded;**

- **implement administrative and structural reforms to make higher education more efficient and accountable;**

- **demonstrate accountability by providing evidence that institutions are successful in meeting statewide needs;**

- **develop funding policies which are fair, rational, and predictable, including rewards for demonstrated quality and performance; and**

- **provide educational opportunities for learning disabled students in higher education.**

Background on the Progress Report

In October 1992, the Coordinating Board for Higher Education adopted 24 goals for Missouri's system of higher education that would contribute to the fulfillment of the vision and address the needs identified in the report of the Task Force on Critical Choices for Missouri Higher Education. Where appropriate, performance measures were established to monitor the progress toward these agreed upon goals. In addition, a group of institutional representatives met on several occasions in 1993 to add clarifying comments that provided operational definitions to assure that the meaning of each goal would be interpreted consistently.

Baseline data for most goals were gathered in 1993. Data have been collected annually since then through the CBHE Survey of Missouri Higher Education Performance Indicators, the Enhanced Missouri Student Achievement Study, and the state and federal surveys completed by the state's public and independent colleges and universities.

On December 7, 1995, Commissioner of Higher Education Kala Stroup asked the CBHE Presidential Advisory Committee to review the 1992 goals and advise the Coordinating Board of any enhancements or modifications deemed necessary to ensure that Missouri's system of higher education continues to move toward the fulfillment of the vision for higher education. Dr. Julio Leon, president of Missouri Southern State College, was invited by Commissioner Stroup to lead this discussion during the Advisory Committee's February and April 1996 meetings. The outcome of those discussions was the reaffirmation of the board's goals and public policy initiatives, as well as the recommendation that selected outcome and performance measures be reviewed and analyzed for their continued appropriateness, e.g., goals and measures related to success rates, graduation rates, and prospective teachers.

1999 Report on Progress Toward the Statewide Public Policy Initiatives and Goals for Missouri Higher Education

1999 Progress Report

This report provides an update on the progress the state's system of higher education is making toward the attainment of the statewide goals reaffirmed by the Coordinating Board in 1996. Goals that are related to Funding for Results have **FFR** in parenthesis after the goal number. In addition, goals are identified as being associated with one or more of the board's values related to access, quality, and efficiency.

QUALITY:

GOAL 1:
(FFR)

Beginning with the fall 1996 semester, all first-time, full-time degree-seeking freshmen who enroll at Missouri's public four-year institutions will have completed the Coordinating Board's recommended 16-unit high school core curriculum.

While the goal adopted by the Coordinating Board in 1992 also applies to transfer students who have completed 23 or fewer credit hours at another institution, it is difficult to identify this group of students with precision. Consequently, reporting on this goal is limited to first-time, full-time degree-seeking freshmen who graduated from a Missouri high school.

Over time, the CBHE recommended high school core curriculum adopted in 1992 has been revised and now includes 13 units in both academic and selected applied high school courses in English, mathematics, science, social science, and fine arts. An additional 3 units of electives selected from the list of recommended disciplines (with 2 units of the same foreign language being highly recommended) are also included. The State Board of Education's College Studies Preparatory Certificate corresponds to the CBHE recommended high school core curriculum, thereby sending a single message to prospective students and their parents about the importance of preparing for college.

Analysis of the Core Between Fall 1992 and Fall 1998

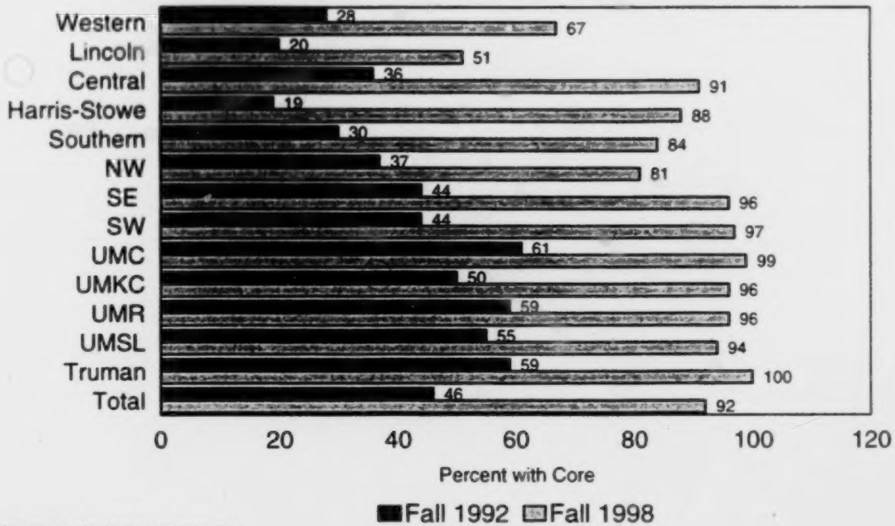
Between the fall of 1992 and the fall of 1998, the proportion of entering Missouri first-time, full-time degree-seeking freshmen who took the CBHE recommended 16-unit high school core curriculum increased from 46 percent to 92 percent (Chart 1) While Truman State University is the only public four-year institution that met this goal in the fall of 1998, several institutions have demonstrated significant progress. The greatest improvement toward this goal has come from Harris-Stowe State College.

The impact of the CBHE recommended high school core curriculum on a student's ACT score continues to be demonstrated. For example, the average ACT composite score for ACT-tested, fall 1998 Missouri first-time, full-time degree-seeking freshmen enrolled in the state's public four-year colleges and universities, who took the CBHE recommended 16-unit high school core curriculum, was 24.3. Those fall 1998 ACT-tested Missouri first-time, full-time degree-seeking freshmen who had less than the recommended 16-unit high school core averaged 21.6 on the ACT, a difference of 2.7 points.

Chart 1

CBHE High School Core Curriculum Reported by Missouri's Public Four-year Colleges and Universities, Fall 1992 and Fall 1998

Missouri First-time, Full-time, Degree-seeking Freshmen



Note: Based on analysis of reported courses
Source: EMSAS

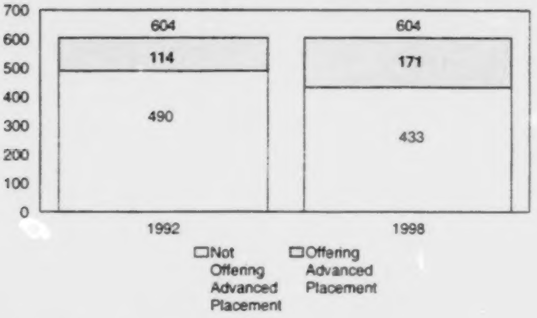
QUALITY:

GOAL 2: **Every Missouri high school will provide opportunities for Advanced Placement (AP) offerings.**

Since 1992, the number of Missouri public and private high schools has remained constant at around 600 (523 public, 81 private). The number offering Advanced Placement (AP) courses, however, has increased nearly 50 percent, from 114 in 1992 to 171 in 1998 (Chart 2). The number of Missouri high school students taking AP courses increased by 69 percent, from 2,864 to 4,841. The number of AP examinations taken by Missouri high school students increased nearly 69 percent, from 4,585 to 7,745, between 1992 and 1998 (Chart 3).

Chart 2

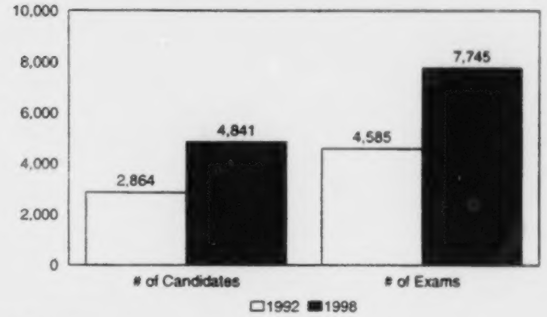
Total Missouri Public and Private High Schools and the Number Offering Advanced Placement, 1992 and 1998



Source: The College Board
Note: Data are not available to make urban vs. rural comparisons

Chart 3

Number of High School Candidates for Advanced Placement Exams and Number of Exams Taken

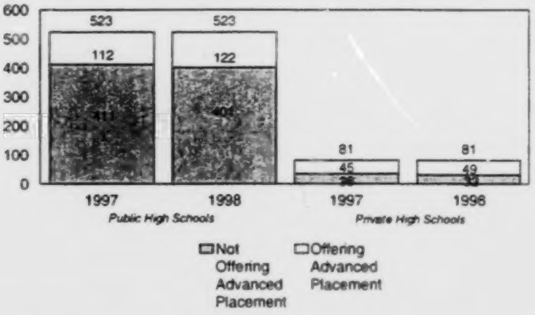


Source: The College Board
Note: Data are not available to make urban vs. rural comparisons

As noted in Chart 4, the number of public and private high schools offering Advanced Placement courses has increased, from 112 to 122 at public high schools and from 45 to 49 at private high schools. The number of AP candidates and the number of AP examinations has slightly increased in both public and private high schools (Chart 5). It should be noted that while the College Board, the source of the AP data, provides the above information for Missouri public and private high schools, the data are not currently broken out between rural and urban high schools.

Chart 4

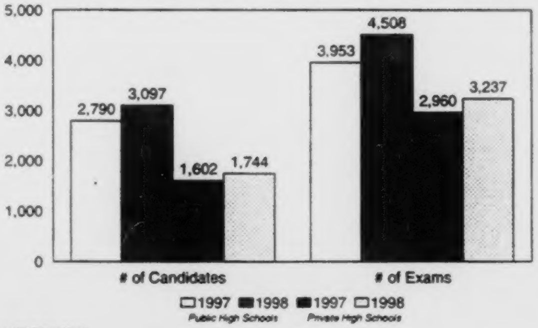
Total Missouri Public and Private High Schools and the Number Offering Advanced Placement, 1997 and 1998



Source: The College Board
Note: Data are not available to make urban vs. rural comparisons

Chart 5

Number of High School Candidates for Advanced Placement Exams and Number of Exams Taken, 1997 and 1998



Source: The College Board
Note: Data are not available to make urban vs. rural comparisons

In 1998, 74.6 percent of the AP examinations written by Missouri students were scored at a grade of three or above on a five-point scale, the highest percentage for all 50 states. Missouri placed second behind the District of Columbia in exam grade averages for public and private schools (3.31), compared to the national average (3.02).

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Beginning with FY 1997, two AP Teacher Development Centers were established, one at Truman State University and the other at Southeast Missouri State University. During the past two years, these centers have provided information about AP at conferences and workshops, trained 302 teachers from 167 schools, and are working with local schools to increase AP offerings throughout the state. In October 1997, the College Board, in cooperation with the two Missouri AP Teacher Development Centers, formed a Missouri AP Advisory Council which works to increase awareness and understanding of, and participation in, the AP program.

ACCESS:

GOAL 3: (FFR) **Minorities will participate and succeed in Missouri's system of higher education in proportions at least equal to their representation in the state of Missouri.**

One context for the board's strategic initiative related to increasing the participation rate of minorities and other underrepresented groups in the state's system of higher education is the need to increase the overall college going rate of Missouri high school students. Mr. J. Leland Johnson and Dr. Stephen G. Katsinas reported in *Outside Looking In: Comparing Missouri to the Nation*, prepared for the 1997 Missouri Governor's Conference on Higher Education, that "Missouri's rate of graduation from its public high schools in 1994 was above the national average, 73 compared to 70 percent (Table 1). However, only 51 percent of Missouri's public high school graduates continue on in college, compared to 57 percent for the nation. Missouri falls further behind the national average when comparing the percentage of its high school graduates who stay in college at age 19, 37 compared to 40 percent nationally."

Table 1

Participation of Recent High School Graduates in Postsecondary Education: Missouri and U.S. Average, 1994

	MO	US
MO Public HS Graduation Rate	73.2%	70.0%
Percent Continuing in College	50.8%	57.2%
Percent in College at Age 19	37.2%	40.0%

Further evidence of the extent to which Missouri participation in higher education lags the nation is provided in a report prepared by Dr. Kent Halstead of Research Associates of Washington. In that report, prepared for the March 26, 1999 meeting of the Missouri Commission on the Affordability of Higher Education and entitled, "Financing Public Higher Education in the State of Missouri and the Role of Tuition," Dr. Halstead indicates that Missouri's 24.3 FTE students per 1,000 residents enrolled in the state's public colleges and universities is 23 percent below the national enrollment rate of 31.3.

Participation and Success of Minority Students Enrolled in Missouri Higher Education

In 1993, "representation" was clarified to mean the proportion of the state's population age 18 or older. "Minority" was clarified to mean African American, Asian, Hispanic, and American Indian/Alaskan native. The following analyses, therefore, do not include non-resident aliens nor do they include unknowns.

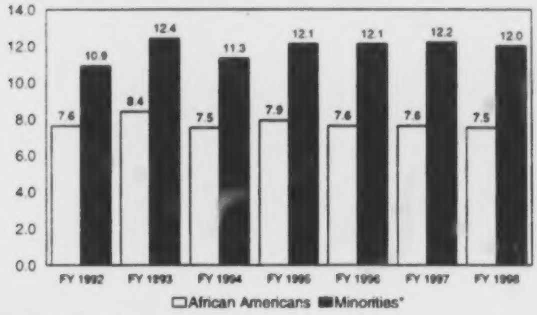
The state demographer, Ryan Burson, has reported that as of July 1996, the U.S. Census Bureau estimates that 13 percent of Missouri's population age 18 and over was from one of the designated minority groups: African American, 10 percent; Asian, 1 percent; Hispanic, 1 percent; and American Indian/Alaskan native, 1 percent.

The proportion of the state's full-time undergraduate enrollment in public and independent colleges and universities comprised of minorities has remained constant from FY 1992 to FY 1998: approximately 7.5 percent African American and 12 percent for all minorities (Chart 6). While the proportion of minorities to the total full-time undergraduate enrollment has remained constant, total full-time undergraduate enrollment at the state's public and independent colleges and universities has declined by slightly over 5 percent between FY 1992 and FY 1998, from 133,617 to 126,843 (Chart 7).

Chart 6

African Americans and Minorities as a Percent of Total Full-time Undergraduate Enrollment

Missouri Public and Independent Two- and Four-year Institutions

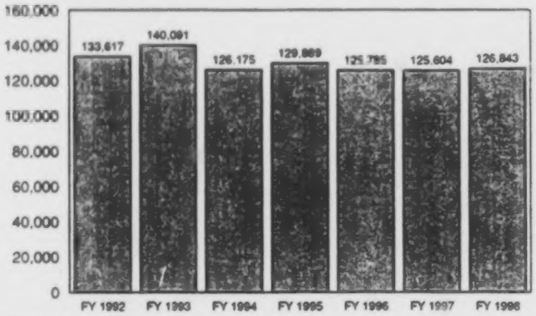


*African American, Hispanic, American Indian/Alaskan native, and Asian
No nonresident aliens or unknowns were included in the calculations
Source: IPEDS EF

Chart 7

Total Full-time Undergraduate Enrollment

Missouri Public and Independent Two- and Four-year Institutions



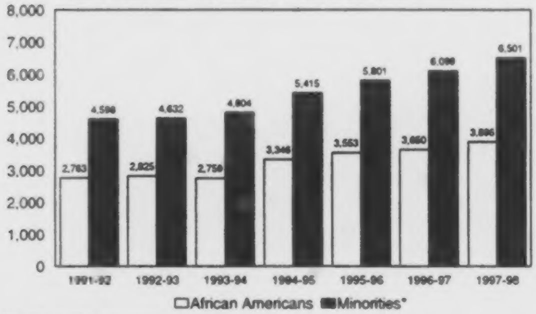
Note: No nonresident aliens or unknowns included
Source: IPEDS EF

Total enrollment in private career schools certified to operate by the CBHE has increased from 20,255 in 1992 to 21,136 in 1997. During that time, African American enrollment in these schools increased from 3,099 to 3,919, or from 15 percent to 19 percent of the total enrollment. All minorities, as a proportion of the total proprietary school enrollment, increased from 19 percent to 23 percent between 1992 and 1997.

Success Based on Degree Completion

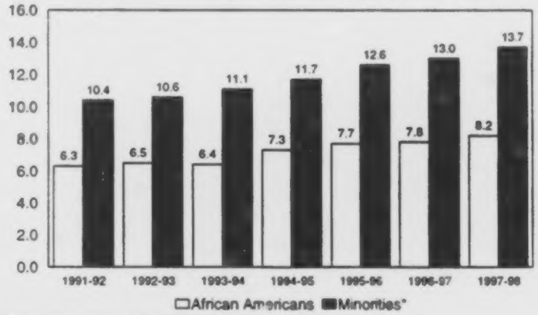
Except for the 1993-94 academic year, there has been a yearly increase in the total number of degrees conferred to African Americans and all minorities (Chart 8), as well as an increase in the percentage of degrees conferred to African Americans and all minorities (Chart 9).

Chart 8
Number of Degrees Conferred to African Americans and Minorities
Missouri Public and Independent Two- and Four-year Institutions



*African American, Hispanic, American Indian/Alaskan native, and Asian
No nonresident aliens or unknowns were included in the calculations
Source: IPEDS C

Chart 9
Degrees to African Americans and Minorities as a Percent of Total Degrees Conferred
Missouri Public and Independent Two- and Four-year Institutions



*African American, Hispanic, American Indian/Alaskan native, and Asian
No nonresident aliens or unknowns were included in the calculations
Source: IPEDS C

Between FY 1993 and FY 1998, the proportion of degrees conferred to African Americans, American Indian/Alaskan natives, Hispanics, and Asians by public institutions has increased at every degree level.

Certificate - from 10.2 percent to 10.3 percent
Associate - from 10.6 percent to 10.8 percent
Baccalaureate - from 7.0 percent to 9.7 percent
Master's - from 7.5 percent to 10.4 percent
Doctorate/First Professional - from 12.7 percent to 14.1 percent

Heartland's Alliance for Minority Participation

Colleges and universities have many initiatives to increase the enrollment of minority students. One joint effort is the Heartland's Alliance for Minority Participation (HAMP). This is a cooperative effort by the National Science Foundation, several Missouri public colleges and universities, and numerous Missouri businesses to (1) increase the number of underrepresented undergraduates pursuing degrees in science, engineering, and mathematics by 15 percent and (2) increase the number of underrepresented students pursuing graduate degrees in science, engineering, and mathematics by 50 percent.

Participants in the HAMP programs include St. Louis Community College, Lincoln University, Central Missouri State University, Southeast Missouri State University, Southwest Missouri

State University, the four campuses of the University of Missouri System (Columbia, Kansas City, Rolla, and St. Louis).

Each participating institution is designing and implementing bridge programs, from pre-college experiences through undergraduate and graduate education, to increase the participation of underrepresented groups in Missouri higher education. The bridge programs include early identification programs, undergraduate transition and retention programs, and graduate school transition programs.

Since its inception three years ago, HAMP has seen a number of accomplishments. They include:

- Increased undergraduate degree production among underrepresented groups in SEM disciplines, from 137 to 567 between 1995 and 1998;
- Increased graduate degree production among underrepresented groups by 72 percent since 1995;
- The development of activities to enhance student retention: early warning initiatives, tutorial services, support groups, mentorships, and co-curricular activities; and
- Facilitated development of articulation agreements for students moving from two- to four-year institutions.

Underrepresentation of Low Social Economic Status and Minority Students as an FFR Element

The Funding for Results (FFR) success of underrepresented groups includes students with a low social economic status (SES) placed in the top quartile of all Pell grant eligible students. In addition, minority students without a low SES are only counted as underrepresented if they are from a targeted group with a graduation distribution lower than the group's percentage in the Missouri population 18-years old or older. Two-year institutions are rewarded for the graduation of students from underrepresented groups at the associate degree and certificates of one year or more levels, while four-year institutions are rewarded for graduations at the baccalaureate degree level.

A review of the proportion of minorities 18-years old or older in the Missouri population and the graduation distributions for minority groups in FY 1997 resulted in the following conclusions. African Americans and American Indian/Alaskan natives are considered underrepresented at both the associate degree and certificates of one year or more levels and the baccalaureate degree level.

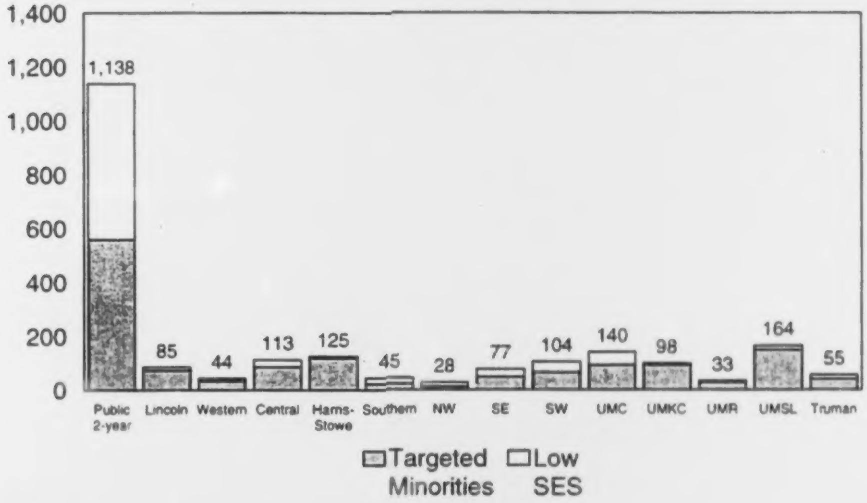
These FFR guidelines for historically underrepresented groups, as defined for the FFR program, were the basis for the board's FY 2000 budget recommendation.

In FY 1997, the community colleges conferred 6,507 certificates and associate degrees, of which nearly 17.5 percent, or 1,138, met the board's criteria for its underrepresented FFR budget recommendation. Of the 1,138 degrees conferred by the community colleges that met this criteria, 49 percent, or 578, were based on low social economic status.

Of the 13,996 baccalaureate degrees conferred by the state's public four-year colleges and universities, nearly 8 percent, or 1,111, met the board's underrepresented FFR budget criteria of which 22 percent, or 247, were based on low social economic status (Chart 10).

Chart 10

Degrees Conferred to Underrepresented Groups*, FY 1997



*At the certificate and associate degree level, African American and American Indian/Alaskan native
At the baccalaureate degree level, African American and American Indian/Alaskan native
Source: EMSAS and IPEDS C

QUALITY:

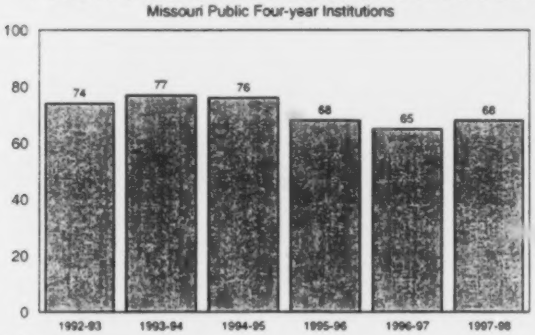
GOAL 4: (FFR) **All newly certified public school teachers entering the profession must be as highly qualified as possible.**

By 1997, 90 percent of the students admitted to state-approved teacher education programs will attain an enhanced ACT composite score at the 66th percentile and/or an equivalent score of 265 or above on the C-Base.

The proportion of prospective teachers entering state-approved teacher education programs in public four-year colleges and universities who are reported as meeting this admission standard has fluctuated slightly since 1992-93. After rising to 77 percent in 1993-94, the proportion declined steadily to 65 percent in 1996-97. The 1997-98 percentage increased slightly over the previous year to 68 percent (Chart 11).

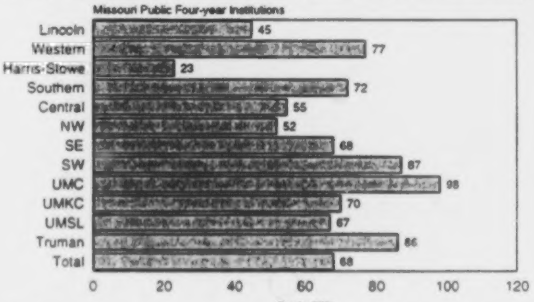
As indicated in Chart 12, the University of Missouri-Columbia substantially surpassed the 90 percent goal, with 98 percent achieving the board's recommendation in 1997-98. Two institutions, Southwest Missouri State University and Truman State University, very nearly achieved the 90 percent goal, reporting that 87 and 86 percent, respectively, of their prospective teachers who met the board's admission goal for students enrolling in teacher education programs.

Chart 11
Percent of Certified Public School Teachers Meeting CBHE Admission Recommendations (ACT Composite at the 66th Percentile and/or a Score of 265 or Above on the C-Base)



Source: Performance indicators survey

Chart 12
Percent of Certified Public School Teachers Meeting CBHE Admission Recommendations (ACT Composite at the 66th Percentile and/or a Score of 265 or Above on the C-Base)



Source: Performance indicators survey

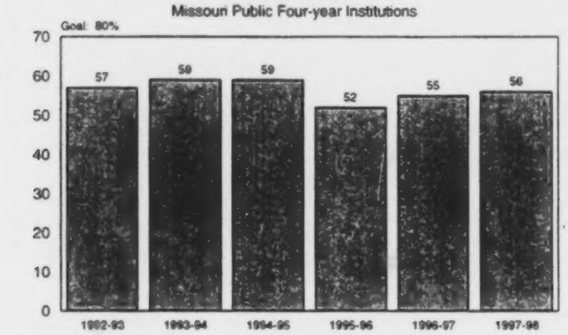
Eighty percent of the prospective secondary school classroom teachers will attain a level of performance on nationally normed Major Field Achievement Tests in their content field, which equals or exceeds the national average, i.e., at or above the 50th percentile.

Major Field Achievement Test scores are not reported to the CBHE by individual disciplines. While institutions did report aggregate performance scores across content fields, they did not report the number of students who took the test. Across all content fields, the percent of graduates recommended for secondary certification who scored above the 50th percentile on a Major Field Achievement Test in the content field increased between 1992-93 and 1997-98 from 9.0 percent to 29.0 percent.

Exit assessment scores on the National Teacher Examination (NTE) for at least 80 percent of the newly certified teachers will equal or exceed the national average, i.e., at or above the 50th percentile.

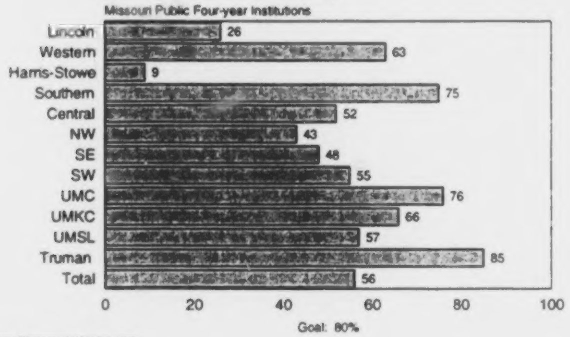
Fifty-six percent of Missouri's prospective teachers scored at or above the 50th percentile on the NTE in 1997-98 (Chart 13). Institutional performance varies considerably, with only one institution, Truman State University, achieving the goal in 1997-98 (Chart 14). Missouri Southern State College and the University of Missouri-Columbia achieved 75 and 76 percent, respectively.

Chart 13
Percent of Teacher Education Graduates Meeting the CBHE Recommended NTE Exit Goal (Scoring At or Above the 50th Percentile)



Source: Performance Indicators survey

Chart 14
Percent of Teacher Education Graduates Meeting the CBHE Recommended NTE Exit Goal (Scoring At or Above the 50th Percentile)



Source: Performance Indicators survey

By definition, 50 percent of the prospective teachers nationally who take the NTE score at or below the 50th percentile. Thus, the proportion of students graduating from Missouri's public colleges' and universities' state-approved teacher education programs exceeded the national average by 6 percent in 1997-98 (i.e. 56 percent of Missouri students scored at a level achieved by only 50 percent of test takers nationally).

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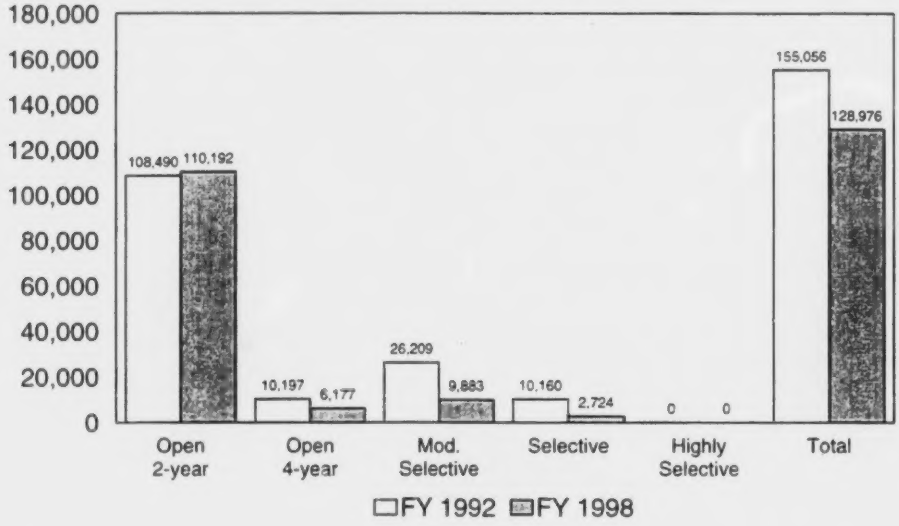
EFFICIENCY:

GOAL 5: **While all Missouri colleges and universities will provide appropriate instructional and student support services, no public four-year institution which is highly selective or selective will offer formal remedial course work.**

This goal has been achieved by four of the five institutions pursuing a selective admissions policy - the University of Missouri campuses at St. Louis, Kansas City, and Rolla, and Southwest Missouri State University, as well as Truman State University, which is pursuing a highly selective admissions policy (Chart 15). The total number of remedial credit hours generated by the state's public two- and four-year colleges and universities declined by 17 percent between FY 1992 and FY 1998, from 155,056 credit hours to 128,976. Eighty-five percent of all remedial credit hours are delivered by the state's public two-year community colleges.

Chart 15

Student Remedial Credit Hours Generated by Missouri Public Institutions, by Admission Category



Source: Performance Indicators survey

EFFICIENCY:

GOAL 6: **No first-time, full-time degree-seeking freshman (or transfer students who have completed 23 or fewer credit hours) who attains a score on the ACT at or below the 33rd percentile, or its SAT equivalent, or has a high school class rank at or below the 33rd percentile, will be admitted to a public four-year college or university which is highly selective, selective, or moderately selective if they reside in a Missouri public community college district or out of state.**

Procedures for data collection and analysis of the above item are currently being considered in the context of analyses performed on the Enhanced Missouri Student Achievement Study database. It has been reported that several public four-year colleges and universities choosing to attain the highly selective, selective, or moderately selective admissions policy are following this goal in their admissions decisions.

EFFICIENCY:

GOAL 7: **Admissions decisions at all public institutions will reflect the statewide admissions guidelines for standards appropriate to highly selective, selective, moderately selective, and open enrollment institutions.**

Highly Selective: combined ACT percentile score and high school percentile rank total points which equal or exceed 140, automatic admission with an ACT test score of 27.

Selective: combined ACT percentile score and high school percentile rank total points which equal or exceed 120, automatic admission with an ACT test score of 24.

Moderately Selective: combined ACT percentile score and high school percentile rank total points which equal or exceed 100, automatic admission with an ACT test score of 21.

Open Admission: students may be admitted based on a high school diploma or its equivalent, but admission to selected programs is based on the program admissions standards.

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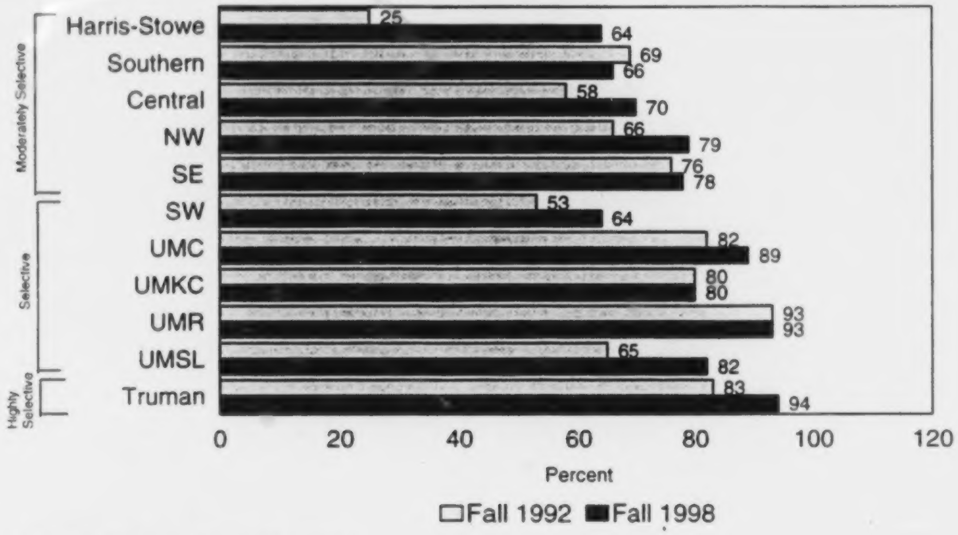
Beginning with the fall 1996 semester, the proportion of first-time, full-time degree-seeking freshmen who met the various admissions goals was derived from data provided by each institution through the Enhanced Missouri Student Achievement Study (EMSAS). The high school percentile rank was calculated from the high school class rank and high school class size reported for each student. The ACT percentile rank was derived from the ACT composite score that the school provided for each student based on an agreed upon conversion table included in the EMSAS instruction manual. Once the 10 percent exception rate is taken into consideration, the University of Missouri-Rolla and Truman State University have met their goals (Chart 16).

Chart 16

Percent of First-time, Full-time Degree-seeking Freshmen Meeting Admissions Guidelines at Missouri Public Four-year Institutions



Note: Percents do not include the 10% exception rate
Lincoln and Western are open enrollment institutions
Source: EMSAS

QUALITY:

GOAL 8: **(FFR)** **Success rates for all first-time, full-time degree-seeking freshmen, defined as the proportion of first-time, full-time degree-seeking freshmen completing 24 or more credit hours by the end of the first academic year and achieving a cumulative college grade point average of 2.0 or better, shall equal or exceed the following:**

- 90 percent at highly selective institutions,
- 85 percent at selective institutions,
- 75 percent at moderately selective institutions, and
- 70 percent at open enrollment institutions.

In the fall of 1997, all public four-year colleges and universities, except Missouri Southern, either equaled or surpassed their 1996 proportion of fall first-time, full-time degree-seeking freshmen who completed their first academic year with 24 credit hours and a cumulative grade point average of 2.0.

The proportion of first-time, full-time degree-seeking freshmen enrolled in Missouri's public two-year community colleges who completed their first academic year with 24 credit hours and a cumulative grade point average of 2.0 was 37 percent in fall 1992 and in fall 1997. A summary by admission category follows:

	1992	**1996**	**1997**
Open Enrollment Institutions: Goal of 70 percent			
Public Two-year Community Colleges	37	30	37
Lincoln University	43	48	54
Missouri Western State College	41	46	52
Moderately Selective Institutions: Goal of 75 percent			
Harris-Stowe State College	18	42	45
Missouri Southern State College	62	65	61
Central Missouri State University	56	72	72
Northwest Missouri State University	62	72	74
Southeast Missouri State University	48	67	67
Selective Institutions: Goal of 85 percent			
Southwest Missouri State University	59	64	69
University of Missouri-Columbia	78	79	82
University of Missouri-Kansas City	70	73	77
University of Missouri-Rolla	78	80	84
University of Missouri-St. Louis	53	57	64
Highly Selective Institution: Goal of 90 percent			
Truman State University	84	85	89

ACCESS:

GOAL 9: **All citizens will have reasonable geographic access to basic general education and vocational instruction at the lower division level through a statewide network of area vocational technical schools and expanded community college service regions.**

Since its inception in 1996, the *State Plan for Postsecondary Technical Education* continues to advance Missourian's access to the state's postsecondary technical education delivery system. Appendix 1 describes other elements related to the progress the state has made to achieve reasonable geographic access to basic general education and vocational instruction provided through the *State Plan for Postsecondary Technical Education*, adopted by the CBHE on June 13, 1996. Highlights of the success the state has made to increase geographic access to the state postsecondary technical education delivery system include the following:

- The 12 Regional Technical Education Councils have a total membership of nearly 400 persons, including 127 employers. The balance of members includes representation from education, local government, state agencies, labor unions, and a small number of proprietary schools.

- Approximately 75 percent (82) of Missouri's counties, 82 percent of Missouri's square miles, and roughly 4,200,000 (82 percent) of Missouri's population now have access to postsecondary technical education among the state's public community colleges, area vocational technical schools, baccalaureate institutions, and a selected number of proprietary (private career schools).

- The community colleges, baccalaureate institutions, and some area vocational technical schools are beginning to deliver a small number of postsecondary technical, general education, and dual credit courses via instructional television networks. These instructional television networks, primarily paid for through technical education and mission enhancement funds, provide instructional linkages between the main campuses, selected area vocational technical schools, and comprehensive high schools within respective service regions.

- By the end of FY 2001, all 17 community college campuses expect to be able to deliver live, interactive two-way technical education instruction between and among nearly 57 area vocational technical schools and comprehensive high schools.

- Since July 1, 1997, the state's two- and four-year public institutions have collaborated to add 22 technical certificate and 29 technical AAS degree programs to postsecondary technical education instructional capacity. From March 1999 through the end of FY 2001, 20 certificates and 40 technical AAS degree programs are projected to be approved by the CBHE. These programs include: mold making technology, precision machining, graphic design/illustration, industrial engineering technology, industrial maintenance, manufacturing engineering technology, heavy equipment maintenance and repair, electrical distribution, integrated manufacturing, industrial management, and respiratory therapy.

- Since July 1, 1997, the state's four-year institutions have added a selected number of bachelor, master's, and PhD degree programs in technical fields.

- In FY 1998 (Year 2), 9,775 unduplicated lower and upper division students enrolled in targeted technical education programs, representing a one percent growth over FY 1997.

- By the end of FY 1999 (Year 3), over 2,000 students are expected to complete selected postsecondary technical courses at off-campus sites located primarily at area vocational technical schools throughout the state.

- Increasing numbers of students are enrolling in and completing courses in priority technical fields, including: computer/information systems, engineering technology related, high-end health occupations, mechanics repairers, precision production trades and science technologies.

- Of the 6,783 associate degree graduates in FY 1998 the number graduating with technical AAS degrees increased to 1,044, representing a 33 percent increase over the past three year average. Targeted technical occupational fields, including: precision production trades, engineering technologies, and mechanics repairers all showed increases in the number of graduates increased to over 15 percent of all associate degrees, or a 2 percent gain.

- The number of FY 1998 students graduating from one- and two-year technical certificate programs was slightly lower at 329 students, representing a 6 percent decline from the past three year average.

- The RTEC organizations are making significant progress enhancing partnerships with the state's 57 area vocational technical schools. During FY 1998 (Year 2), the community colleges worked with 50 (88 percent) of the AVTSs to develop transfer and articulation agreements. These agreements yielded over 223 transfer secondary and adult technical program courses to equivalent postsecondary technical courses/programs. The average number of equivalent credits that will transfer from an AVTS program is 12.

- The four-year baccalaureate institutions are making significant progress in accepting technical AAS degree program credits toward technology bachelor degree programs. During FY 1998 (Year 2), 9 four-year public and private institutions completed 61 AAS transfer and articulation agreements.

- Students graduating with a technical certificate or AAS degree earn between $22,000 and $31,000 per year within the first 13 months of employment.

- Students graduating from math and science based technical programs at the associate degree level or less earn between $18,000 and $32,000 within the first 13 months of employment.
    - Advanced Level Health Occupations: $23-32,000
    - Engineering Technology: $18-31,000
    - Computer Information Systems: $22-24,000
    - Mechanics and Repairers: $19-29,000
    - Precision Production: $18-29,000

- There are a number of other successes attributable to postsecondary technical education initiatives, such as:
    - 2 + 2 cooperative industrial technology degree between St. Louis Community College, Southeast Missouri State University, and University of Missouri-St. Louis;
    - Statewide implementation of the ACT product "Counseling for High Skills," which promotes and explores technical careers;
    - Passage of the Advantage Missouri financial aid package which forgives college tuition/fees when students major in certain technological occupational fields, and immediately work in Missouri upon graduation; and
    - Designation of the industrial technology division as a Polytechnic Institute at Southeast Missouri State University.

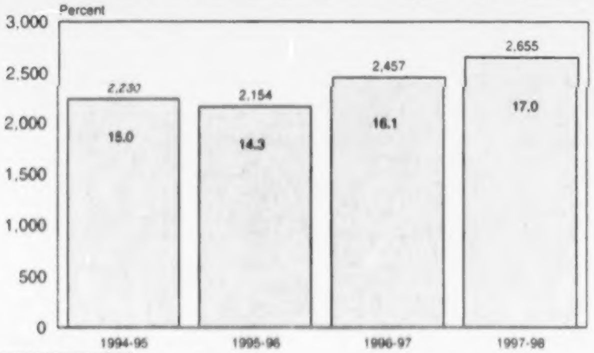
EFFICIENCY:

GOAL 10: (FFR) **The number of students successfully transferring from Missouri's two-year institutions and completing a baccalaureate degree at one of the state's public or independent four-year institutions will at least double the comparable rate of transfers for academic year 1990-91.**

During 1997-98, 15,631 baccalaureate degrees were conferred by the state's public four-year colleges and universities. Among these baccalaureate degree recipients were 2,655 graduates with 12 credit hours or more transcripted at a Missouri public two-year community college(s) representing 17 percent of all 1997-98 baccalaureate degree recipients (Chart 17). This represents a 19 percent increase over the 2,230 1994-95 baccalaureate degree recipients with 12 credit hours or more transcripted at a Missouri community college.

Chart 17

Number and Percent of Baccalaurate Degree Recipients from Missouri Public Four-year Institutions Who Took 12 or More Credit Hours at a Missouri Public Two-year Institution



Total baccalaureate degrees conferred
1994-95 15,309 1995-96 15,032 1996-97 15,227 1997-98 15,631
Source: EMSAS

ACCESS:

GOAL 11: **The aggregate number of minorities employed statewide by all public and independent institutions collectively as faculty and administrative staff will at least equal their representation in the state of Missouri.**

In 1993, "representation" was clarified to mean the proportion of the state's population age 18 or older. “Minority” was clarified to mean African American, Hispanic, American Indian/Alaskan native and Asian. The following analyses, therefore, do not include non-resident aliens, nor do they include unknowns. The state demographer, Ryan Burson, has reported that as of July 1996, the U.S. Census Bureau estimates that 13 percent of Missouri's population age 18 and over was from one of the designated minority groups: African American, 10 percent; Asian, 1 percent; Hispanic 1 percent; and American Indian/Alaskan native, 1 percent.

The proportion of minority faculty and administrative staff employed by Missouri's public and independent two- and four-year colleges and universities is the same at 14.8 percent in the fall of 1998 as it was in the fall of 1991. The proportion of African American employees has decreased slightly from 10.1 percent in the fall of 1991 to 9.4 percent in the fall of 1998 (Chart 18). The proportion of minority full-time faculty at the state's public and independent colleges and universities has increased from 10.1 percent in the fall of 1991 to 11.2 percent in the fall of 1998. The proportion of African American faculty increased from 3.1 percent in 1991 to 3.3 percent in 1998 (Chart 19).

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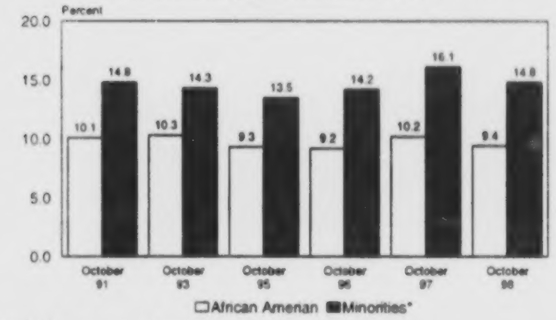
Chart 18
Minorities and African Americans as a Percent of Full-time Employees

Missouri Public and Independent Two- and Four-year Institutions

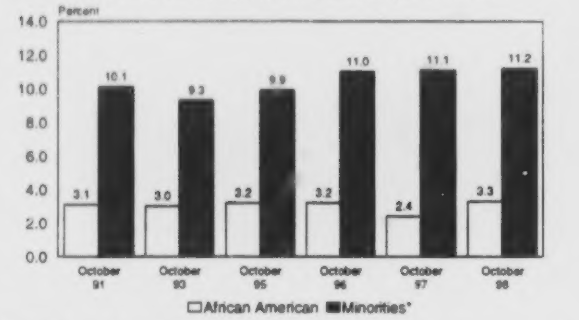


*African American, Hispanic, American Indian/Alaskan native, and Asian.
No nonresident aliens or unknowns were included in the calculations.
Source: IPEDS Staff

Note: Data are missing for Westminster and William Woods for 1998.

Chart 19
Minorities and African Americans as a Percent of Full-time Faculty

Missouri Public and Independent Two- and Four-year Institutions



*African American, Hispanic, American Indian/Alaskan native, and Asian.
No nonresident aliens or unknowns were included in the calculations.
Source: IPEDS Staff

Note: Data are missing for Westminster and William Woods for 1998.

QUALITY:

GOAL 12: (FFR) **Degree programs (i.e., majors) offered by Missouri's public institutions shall, at a minimum, satisfy the following criteria:**

- **Demonstrate centrality to the sponsoring institution's mission;**
- **Provide objective evidence of success in addressing statewide needs and/or contributing toward the attainment of statewide goals;**
- **Maintain a critical mass of majors and graduate annually an average, calculated over the prior three years, of at least 10 majors at the associate or baccalaureate degree level, 5 majors at the master's degree level, and 3 majors at the doctoral degree level unless there is sufficient justification for exceptions, particularly in the arts and sciences; and**

The criteria for the approval of new degree and certificate programs include centrality to mission and demonstrated program need. Demonstrated need includes student need, occupational need, and societal need. Projected performance goals and student performance outcomes are also submitted for all new degree programs for which CBHE approval is required. These include enrollment projections, student and program outcomes, specialized program accreditation, and alumni and employer surveys.

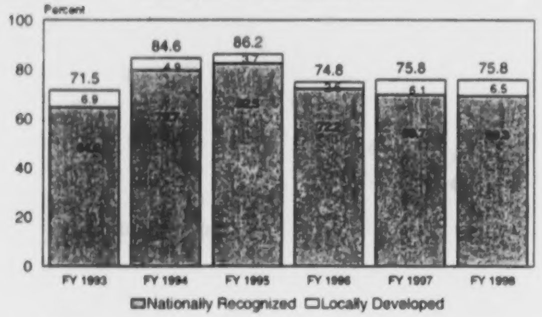
Productivity by individual degree program is analyzed at the campus level. Public four-year institutions engage in systematic review of all degree programs through a campus-based program review process that emphasizes program improvements as well as actions to enhance, maintain, or eliminate program offerings. The CBHE review of degree program performance and productivity occurs within the context of each institution's five-year mission review. The academic program areas reviewed by the public four-year colleges and universities in 1997-98 are listed in Appendix 2.

- **regularly produce highly qualified graduates as demonstrated in the following areas:**
  a. **Performance on assessments of general education, including measures of oral and written communication skills and critical thinking;**

All Missouri public two- and four-year institutions have assessment programs that measure student performance on assessments of general education. The percent of baccalaureate degree graduates taking either national or local assessments of general education has increased from 71.5 percent to 75.8 percent between FY 1993 and FY 1998 (Chart 20). Assessment of associate degree graduates in general education increased from 19.1 percent to 80.8 percent during the same time period (Chart 21).

Chart 20

Percent of Baccalaureate Degree Recipients Who Were Assessed in General Education Using a Nationally Recognized or Locally Developed Instrument

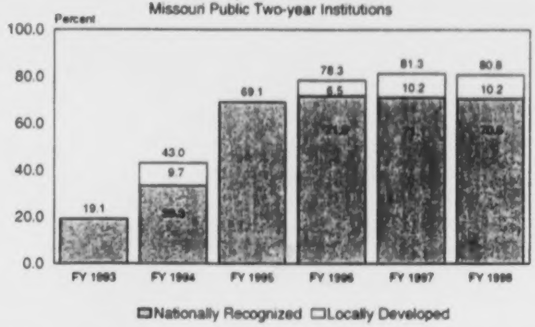


Source: Performance indicators survey

Chart 21

Percent of Associate Degree Recipients Who Were Assessed in General Education Using a Nationally Recognized or Locally Developed Instrument

Missouri Public Two-year Institutions



Source: Performance indicators survey

The proportion of baccalaureate students taking nationally normed tests of general education has increased from almost 50 percent to just over 62 percent between FY 1993 and FY 1998 and nearly three out of five of these baccalaureate graduates scored above average (Chart 22). Chart 23 shows, for each public four-year institution, the proportion of FY 1998 baccalaureate degree recipients assessed with a nationally normed examination of general education and, of those, the proportion of graduates scoring at or above the 50th percentile.

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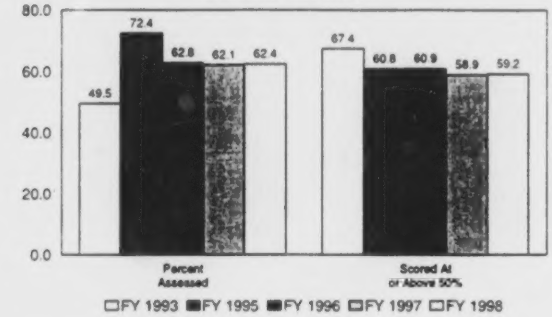
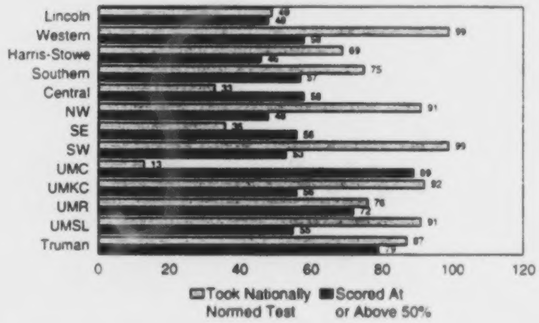
Chart 22
Percent of Baccalaureate Degree Recipients Performing at the 50th Percentile or Higher on Nationally Normed Assessments of General Education



Source: Performance indicators survey

Chart 23
Performance on Assessments of General Education, FY 1998
Missouri Public Four-year Institutions

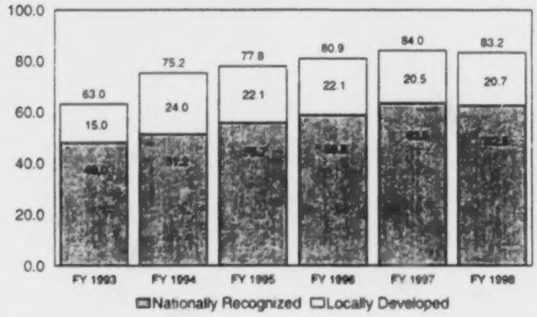


Source: Performance indicators survey

b. performance on nationally normed tests, licensure or certification examinations, and/or other measures of achievement in the major;

All Missouri public four-year institutions have assessment programs that measure performance in the major. The percent of baccalaureate graduates taking either national or local assessments in the major between FY 1993 and FY 1998 has increased from 63 percent to slightly over 83 percent (Chart 24).

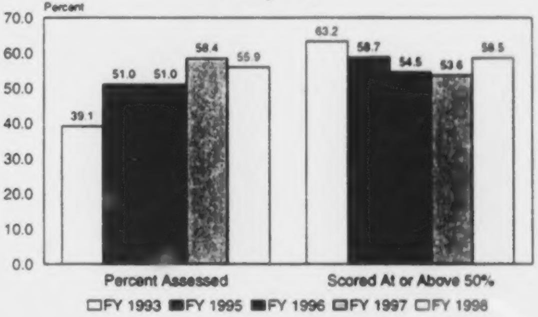
Chart 24
Percent of Baccalaureate Degree Recipients Who Were Assessed in Their Major Field Using a Nationally Recognized or Locally Developed Instrument



Source: Performance indicators survey

The proportion of baccalaureate graduates taking nationally normed assessments in the major has increased from 39 percent to nearly 56 percent between 1992-93 and 1997-98; however, with the increased number of students taking nationally normed examinations, the proportion of graduates scoring above the national average has gravitated toward the national average, declining from 63.2 percent of all graduates in FY 1993 to 58.5 percent in FY 1998 (Chart 25). Chart 26 shows, for each public four-year college and university,

Chart 25
Percent of Baccalaureate Degree Recipients Performing at the 50th Percentile or Higher on a Nationally Normed Major Field of Study Test



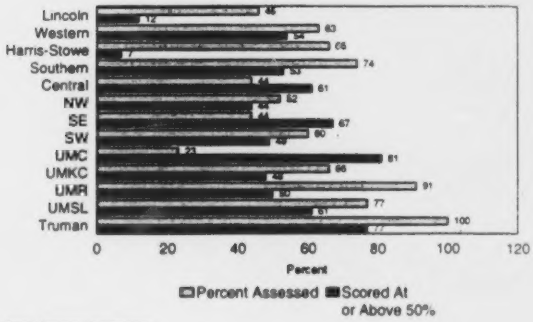
Source: Performance indicators survey

the proportion of FY 1998 baccalaureate degree recipients assessed in their major with a nationally normed examination and, of those who were tested, the proportion that scored at or above the 50th percentile.

Chart 26

Performance of Baccalaureate Degree Recipients on a Nationally Normed Major Field of Study Test

Missouri Public Four-year Institutions



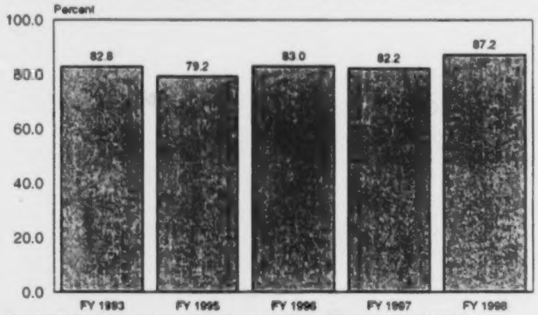
Source: Performance indicator survey

The percent of baccalaureate graduates taking national licensure, certification, or registration examinations, where a nationally recognized or normed examination in a major field of study does not exist, who had pass scores increased between FY 1993 and FY 1998, from nearly 83 percent to slightly more than 87 percent (Chart 27).

At the associate degree level, the percent of degree recipients taking licensure, certification, or registration examinations, where nationally recognized or nationally normed examinations do not exist, with pass scores increased from 81.8 percent to 95.6 percent (Chart 28). Pass rates at the certificate level have remained fairly constant, 86.6 percent in FY 1994 and 86.7 percent in FY 1998 for those students receiving either a one- or two-year certificate (Chart 29).

Chart 27

Percent of Baccalaureate Degree Recipients Who Received Pass Scores on Nationally Recognized Exams for Licensure, Certification, or Registration, Which Do Not Provide Norms



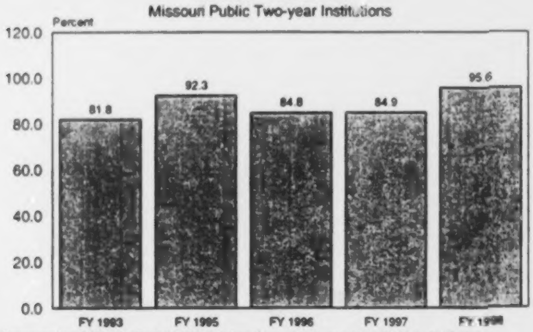
Note: Percentage is calculated on the basis of the number of baccalaureate degree recipients who took a nationally recognized exam for licensure, certification, or registration which did not provide norms.

Source: Performance indicators survey

Chart 28

Percent of Associate Degree Recipients Who Received Pass Scores on a Licensure, Certification, or Registration Exam That is Scored Pass/Fail

Missouri Public Two-year Institutions

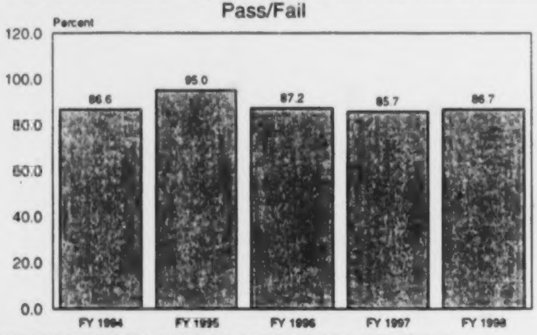


Note: Percentage is calculated on the basis of the number of associate degree recipients who took a licensure, certification, or registration exam that is scored pass/fail.

Source: Performance indicators survey

Chart 29

Percent of Certificate Completers Who Received Pass Scores on a Licensure, Certification, or Registration Exam That is Scored Pass/Fail



Note: Percentage is calculated on the basis of the number of certificate recipients who took a licensure, certification, or registration exam that is scored pass/fail.

Note: includes more than 1 year but less than 2-year and more than 2 year but less than 4-year certificates

Source: Performance indicators survey

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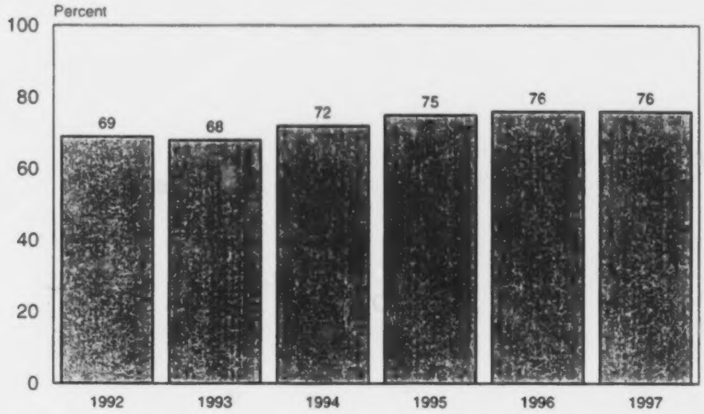
c. average placement rates of those seeking employment which take into account general economic conditions; and

The proportion of community college vocational education program completers finding jobs in fields related to their educational preparation and training increased from 69 percent in 1992 to 76 percent in 1997 (Chart 30). The placement rate for 1997 vocational education completers at Linn State Technical College was 91 percent.

Chart 30

Percent of Community College Vocational Education Program Completers Employed in a Related Field



Source: Department of Elementary and Secondary Education

d. alumni and employer satisfaction rates.

The CBHE staff, in cooperation with the state's public colleges and universities, has conducted statewide surveys of recent college graduates, currently enrolled students, and employers of the state's college graduates.

Findings from the 1998 statewide survey of currently enrolled students in the state's public colleges and universities administered during the spring 1998 semester include the following:

- The primary reasons students give for choosing a particular institution are academic quality, cost, location, and personal influences.

- Students at four-year institutions report such academic factors as specific programs or overall reputation as their main reasons for college choice. In contrast, there has been a tendency to pay less regard to these academic factors among those who attend two-year institutions.

- Across all academic disciplines, there has been a consistent decline in the number of college students who indicated inadequate coursework in high schools.

- When questioned about their college coursework, most respondents described their academic experience as rigorous or demanding. This is especially true of students on four-year campuses.

- On average, students reported spending about the same amount of time on course-related activities and social/recreational life, but spent more time on paid employment.

- At both two- and four-year institutions, students tend to view career-related skills and competence as their most expected college outcomes. In comparison, they appeared to be less concerned with acquiring a well-rounded general education.

- Over the last five years, the major areas of improvement at two- and four-year institutions include access to computer facilities, career planning and placement, response to the needs of non-traditional students, transfer of course credits between institutions, and variety of courses offered.

- Collegiate experience appears to have a substantial impact on students' educational aspirations at all surveyed Missouri public institutions. According to students' responses, 66 percent plan to earn a master's degree in their lifetime.

QUALITY:

GOAL 13: (FFR) **Graduation and time-to-completion rates for first-time, full-time, degree-seeking freshmen shall equal or exceed the following, and graduation rates for minority students will be comparable to those attained for all students:**

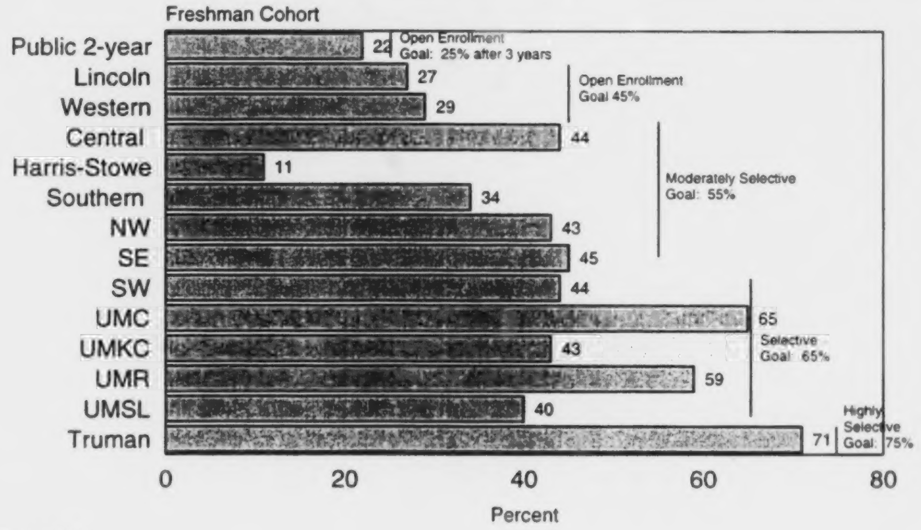
- 75 percent after 6 years at highly selective institutions
- 65 percent after 6 years at selective institutions
- 55 percent after 6 years at moderately selective institutions
- 45 percent after 6 years at open enrollment four-year institutions
- 25 percent after 3 years at public two-year community colleges

Missouri Public Two- and Four-year Colleges and Universities

This goal does not specify how the graduation rate should be calculated, i.e., based on the number of students graduating from the institution they first entered (the home institution) or from any institution in the public sector (a common method being employed in several states). Chart 31 shows the graduation rate of those students entering Missouri public colleges or universities in the fall of 1992 who graduated from any of the state's public institutions (not necessarily the institution they first entered).

Chart 31

Three- and Six-year Graduation Rate of the 1992 (4-year) or 1995 (2-year) Freshman Cohort Who Graduated from Any Missouri Public Institution as of Spring 1998



Source: EMSAS

Overall, the three-year graduation rate for the state's two-year public community colleges' 1995 freshman cohort is 22 percent from any Missouri public college or university. The three-year graduation rate for the state's community colleges is slowly approaching the CBHE goal of 25 percent for open enrollment two-year colleges.

The overall six-year graduation rate for the 1992 freshman cohort at the state's public four-year colleges and universities graduating from any Missouri public college or university is 49 percent, which compares to an overall rate of 47 percent for 1989 freshmen. The University of Missouri-Columbia has met the board's 65 percent graduation rate goal for selective admissions institutions; Truman State University is approaching the 75 percent six-year graduation rate goal with a graduation rate of 71 percent.

One result of the higher graduation rates at Missouri's public colleges and universities is reported in *Outside Looking In: Comparing Missouri to the Nation.* This report was presented by Mr. J. Leland Johnson of The Medical College of Ohio and Dr. Stephen G. Katsinas of the University of Toledo at the 1997 Missouri Governor's Conference on Higher Education. In the report, Johnson and Katsinas describe how "In 1990, Missouri was well behind the U.S. average for associate, baccalaureate, and graduate and professional degree attainment. Between 1990 and March of 1997, this gap has largely been closed. This represents dramatic progress, the result of enlightened leadership from your legislature, governor, coordinating board, and business and civic communities." The data Johnson and Katsinas used in support of this statement are presented in Table 2.

Table 2

**Closing the Gap: Adult Educational Attainment,
Missouri & the U.S., 1990 compared to March 1997**

Educational Attainment	**1990**		**March 1997**	
	MO	**US**	**MO**	**US**
Associate Degree	**4.5%**	**6.2%**	**6.2%**	**7.2%**
Bachelor's Degree	**11.7%**	**13.1%**	**15.4%**	**16.0%**
Grad/Prof Degrees	**6.1%**	**7.2%**	**7.5%**	**7.8%**

Degree/Certificate Productivity as an FFR Element for Public Two-year Community Colleges

In 1997-98, 6,295 students graduated with associate degrees from the state's public two-year community colleges and Linn State Technical College, which compares to 6,073, a nearly 4 percent increase over the number of associate degrees conferred in 1992-1993. The number of students receiving certificates of one year or greater was 1,038 in 1997-98, which compares to 1,793 certificates conferred in 1992-93, a decrease of 42.1 percent. Fluctuations in these figures can be attributed to the inclusion of part-time students who complete degrees at variable rates. Moreover, the economy (e.g., students' ability to find and obtain jobs before completing degree or certificate requirements) affects student enrollment and graduation rates.

EFFICIENCY:

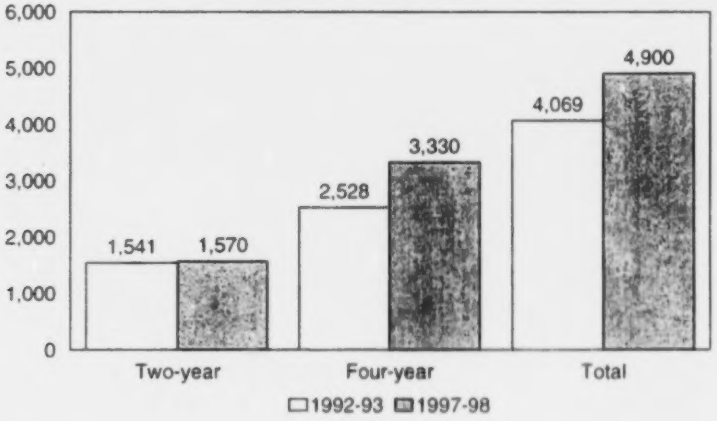
GOAL 14: **The number of students completing programs of study in those high skill trades and disciplines determined to be critical to Missouri's future and/or in short supply (e. g., machinists, maintenance mechanics, tool and die makers, manufacturing technologies, the physical and life sciences, mathematics, foreign languages, allied health, and nursing) will more than double over the number of degrees conferred in these areas for academic year 1990.**

Baseline data were not obtained in 1990-91. There has been, however, a 20 percent increase in the number of degrees conferred by Missouri's public two- and four-year colleges and universities and Linn State Technical College in those disciplines determined in 1992 to be important to the state's future, increasing from 4,069 in 1992-93 to 4,900 in 1997-98, an increase of 831 degrees (Chart 32).

Chart 32

Number of Students Completing Programs of Study in Critical High Skill Trades or Disciplines

Missouri Public Institutions



Source: EMSAS

A list of the critical disciplines determined in 1992 to be important to the state's future and that are included in this analysis is located in Appendix 3.

It is important to note that this list was established in 1992 following the Missouri Business and Education Partnership Commission report as well as several other reports by different regional and statewide groups at the time, e.g., the St. Louis Civic Progress report. The Task Force on Critical Choices also identified these as areas of critical need and requiring attention. While it may be important to continue reporting on the number of degrees being conferred in those disciplines identified as being critical in 1992, it is just as important that this list be reviewed and discussed within the context of manpower needs of the late 1990s and beyond and the advent of the Missouri Advantage loan forgiveness program for students working in targeted, high demand occupations identified by the CBHE as required by state law (Section 173.775 RSMo).

QUALITY:

GOAL 15: (FFR) **The percentage of Missouri's baccalaureate graduates scoring above the 50th percentile on nationally normed exit assessments in their major field of study will rank among the 10 highest recorded for all states; furthermore, the number of baccalaureate graduates scoring above the 80th percentile on appropriate nationally normed assessments will double.**

Missouri does not currently have data on the performance of students from other states. The proportion of Missouri baccalaureate degree recipients scoring at or above the 50th percentile on nationally normed assessments in the major field of study is nearly 59 percent. (See Goal 12 for further detail.)

QUALITY:

GOAL 16: (FFR) **Missouri's public and independent doctoral degree-granting universities should strive to have graduate programs recognized nationally as being among the best in the United States:**

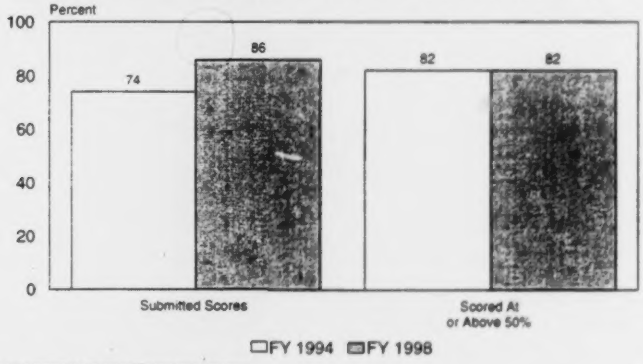
Several doctoral programs offered by Missouri's public and independent colleges and universities have received national recognition by the National Research Council (NRC) for their quality. In addition, the FY 2000 mission enhancement funding for the University of Missouri recommended by the Coordinating Board includes funding to advance selected graduate programs to enable them to become recognized nationally by the academic community.

- **by having all students who are admitted to graduate programs for which there is a nationally normed admissions test (e.g., GRE, MAT, LSAT, etc.) submitting such scores prior to admission to Missouri's graduate programs with 66 percent of all first-time graduate students scoring above the 50th percentile on the respective examinations;**

Chart 33 shows that the proportion of first-time, full-time graduate and first professional students submitting entrance examination scores at the four campuses of the University of Missouri increased from 74 percent to 86 percent between FY 1994 and FY 1998. The percentage of those submitting scores and scoring at or above the 50th percentile on those entrance examinations remained at 82 percent between FY 1994 and FY 1998.

Chart 33

Percent of First-time, Full-time Graduate and First Professional Students at the Univesity of Missouri Submitting National Entrance Examination Test Scores and Their Performance

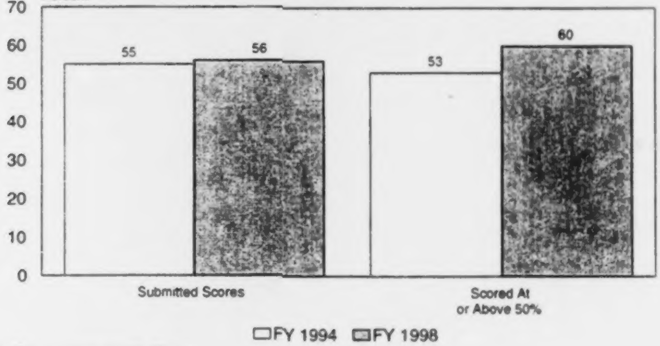


Note: Includes master's, doctoral, and first professional programs
Source: Performance Indicators survey

During the same period, the state's other master's degree-granting institutions (Central, Lincoln, Northwest, Southeast, Southwest, and Truman) increased the proportion of first-time, full-time graduate students submitting entrance examination scores from 55 to 56 percent. In addition, the percentage of those who submitted scores and scored at or above the 50th percentile on those examinations increased from 53 to 60 percent (Chart 34).

Chart 34

Percent of First-time, Full-time Graduate Students at Missouri's Master's Degree-granting Institutions Who Submitted Scores and Scored At or Above the 50th Percentile on National Entrance Exams



Note: Does not include the University of Missouri
Source: Performance indicator survey

- **by increasing the number and proportion of doctoral degrees awarded in each program to citizens of the United States;**

In FY 1992, 541 (76 percent of the total) doctoral degrees from Missouri institutions were conferred to U. S. citizens; in FY 1997, the figure was 526 (74 percent of all doctoral degrees), and in FY 1998, 572 (74% of all doctoral degrees).

- **by having all academic divisions/departments of Missouri's public and independent colleges and universities provide their faculty with electronic access to state, national, and international education/research communication networks;**

The goal of providing high-speed Internet access for faculty has been almost universally achieved at Missouri's public and independent colleges and universities. Universal high-speed Internet access for students is also assumed at colleges and universities. The educational and research needs of Missouri higher education for a high-speed state network are being addressed through appropriations to the Missouri Research and Education Network (MOREnet). The first dedicated appropriation for the general funding of MOREnet was initiated in FY 1998 with a $5 million appropriation to the University of Missouri, which serves as host to MOREnet. For FY 2000, the governor has recommended an appropriation of $11.9 million. This appropriation is being used to provide a connection to the national Internet, to fund the Missouri backbone to provide appropriate connection capacity to each of the public two- and four-year colleges and universities, and to provide management, operation, and training costs and software licenses on behalf of MOREnet to member colleges and universities

In order for institutions to make maximum use of Internet connectivity and information technology in general, a strong campus infrastructure must exist.

- **by improving computer-based linkages among all college and university libraries, enhancing access and exchange opportunities as well as expanding interactions via national and international networks; and**

During FY 1998, the Council on Public Higher Education (COPHE) employed Joseph Ford and Associates, Inc., a library consulting firm, to develop a plan for a common library platform in Missouri. A plan and budget for this common platform is provided in the consultant's report, *Missouri Academic Libraries and Their Automated Futures*. This document describes a system in which all bibliographic holdings are contained in one computer software system serving

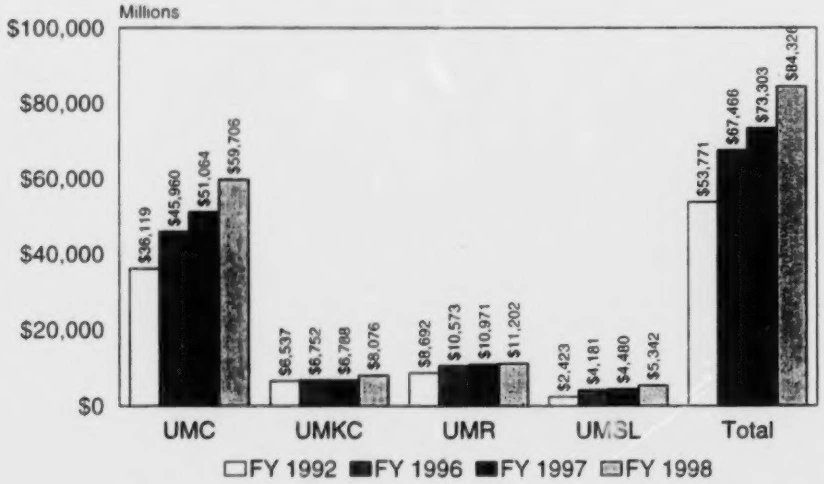
Missouri's public and independent academic libraries. These libraries collectively own approximately 14 million volumes. The system will allow direct patron borrowing between institutions, allowing an authorized patron at one library to place a direct borrowing request to another common library platform. The system would use Missouri's investment in MOREnet to facilitate a high-speed connection between each participating academic library and the computer host site. The CBHE's FY 1999 appropriations request for this project has been supported by both the governor and the House of Representatives. Missouri institutions have developed a memorandum of understanding to establish a consortium, MOBIUS, to operate the computer and software systems needed to support the common library platform. The consortium of academic libraries is also involved in the development of an interlibrary delivery system to guarantee rapid movement of documents among institutions.

- **by increasing by 50 percent, by 1996 , the amount of money awarded on a competitive basis to Missouri's public research universities from both federal and other external sources for basic and applied research grants and contracts.**

Between FY 1992 and FY 1998, the amount of funds obtained for research on a competitive basis by the University of Missouri campuses increased 57 percent, from $53,771,000 in FY 1992 to $84,326,000 in FY 1998, an increase of $30,555,000 (Chart 35).

Chart 35

Competitively Obtained Research Funds by Public Doctoral Degree-granting Institutions



Source: Performance Indicator survey

EFFICIENCY:

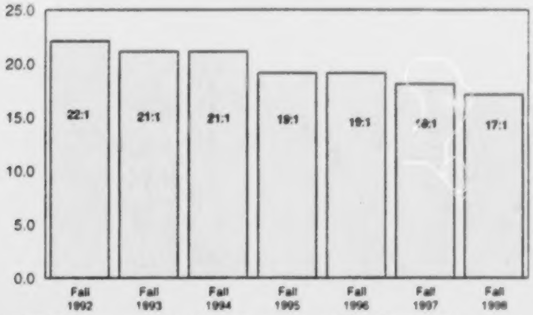
GOAL 17: **Excluding positions funded by grants, contracts, and other restricted income sources as well as self-supporting auxiliaries, until such time that a Missouri public higher education institution attains ratios for administrative and non-instructional staff-to-faculty that are in the most efficient quartile for comparable institutions nationally, the annual rate of growth in its administrative and non-instructional personnel shall not exceed one-half the annual rate of growth in full-time faculty.**

One measure of an institution's efficiency, or academic effectiveness, is its student-to-faculty ratio. Chart 36 shows that the state's public four-year colleges and universities have reduced the overall student-to-faculty ratio from 22 to 1 in 1992 to 17 to 1 in 1998.

Chart 36

On-campus FTE Student/FTE Faculty Ratio

Missouri Public Four-year Institutions



Note: While these data are as reported by the institution, Missouri has no method for calculating FTE faculty. Figures may include off-campus FTE faculty.
Source: DHE02, Budget Form 3

The three-year average annual rate of change in the number of positions funded by unrestricted education and general funds at the public four-year institutions, from FY 1995 through FY 1998 is 5 percent for faculty and 6.6 percent for other employees. The three-year average annual rate of change for the public two-year community colleges is -1.7 percent for faculty and 6.3 percent for all other employee categories (Chart 38).

Between FY 1995 and FY 1998, the number of faculty positions funded by unrestricted education and general funds at the state's public four-year colleges and universities increased from 5,786 to 6,671 but decreased from 1,648 to 1,565 at the public two-year community colleges. The number of positions for all other employees also increased between FY 1995 and FY 1998 at the state's public four-year colleges and universities, from 6,493 to 7,841, and increased from 1,751 to 2,087 at the public two-year community colleges (Chart 37).

Chart 37

FTE Positions Funded by Unrestricted Education and General Funds

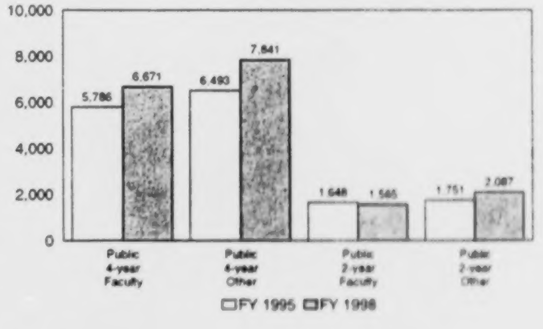
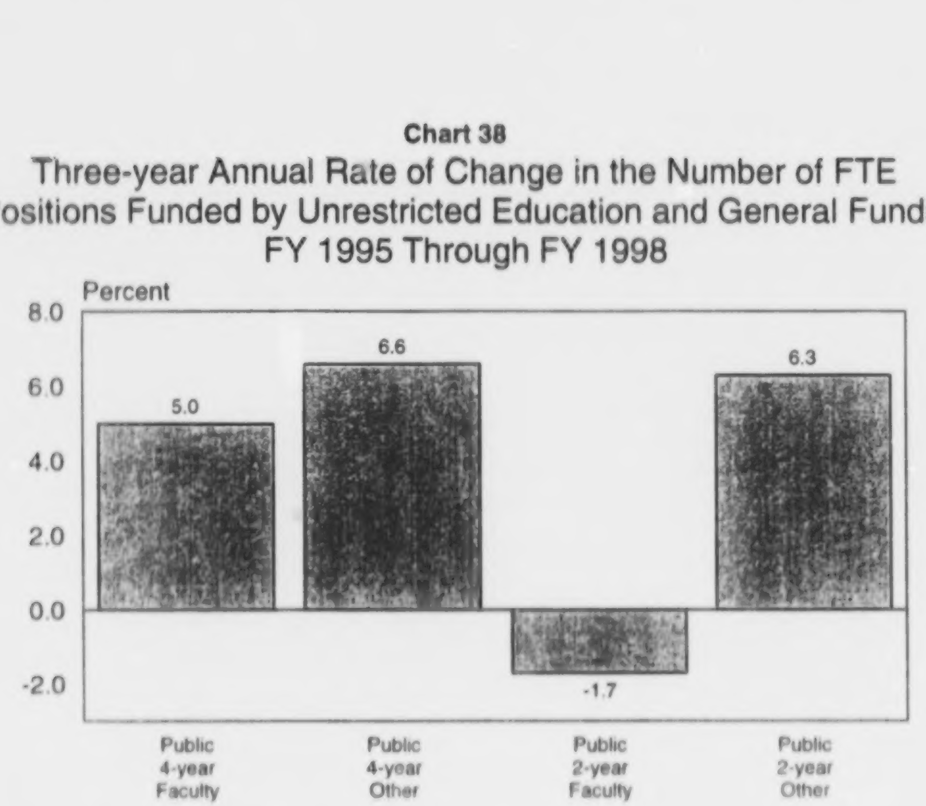


Chart 38

Three-year Annual Rate of Change in the Number of FTE Positions Funded by Unrestricted Education and General Funds, FY 1995 Through FY 1998



Note: Average annual rate of change FY 1995 to FY 1996, FY 1996 to FY 1997, and FY 1997 to FY 1998
Includes West Plains

QUALITY:

GOAL 18: **Missouri's public four-year institutions will adopt workload policies that result in average teaching assignments for all tenured and tenure-track faculty by institutional type consistent with the following:**

- **9 hours at highly selective, selective, and research institutions**
- **12 hours at all other public four-year institutions**

Workload policies are one component of institutional mission differentiation and are analyzed at the campus level as part of the annual campus-based review process. Faculty use of time is dependent upon the balance of responsibility among teaching, research, and service assignments.

ACCESS:

GOAL 19: **The Charles E. Gallagher Grant Program (formerly the Missouri Student Grant Program) will be strengthened by:**

- **being fully funded to provide for all eligible applicants;**

Since FY 1992, the CBHE has made a persistent effort to increase the funding of the Charles E. Gallagher Grant Program. For FY 2000, the CBHE requested an increase of $653,755 for the general revenue portion of the program. This is intended to fund inflation in student fees and to provide approximately 500 additional awards to eligible students, assuming a $1,290 average annual award.

Knowing the importance of continuing to provide and improve financial access, particularly to the neediest students, new state financial assistance programs have been created. For example, in FY 1999 Governor Carnahan recommended, and the 1998 Missouri Assembly appropriated, $4.9 million for the new Bridge Scholarship Program. The Bridge Program will provide need-based scholarships to approximately 6,000 eligible students for the first two years of postsecondary education. For FY 2000, Governor Carnahan recommended $4.8 million for the Bridge Scholarship Program.

The 1998 Missouri General Assembly enacted, and Governor Carnahan signed into law House Bill 1519 which created the Missouri College Guarantee Program. This program will provide need-based grants to the neediest students. Governor Carnahan recommended $7.3 million for FY 2000 to be distributed to eligible students beginning in the fall 1999 semester.

Beginning with the 1999-2000 academic year, two additional new state student financial assistance programs, that were also authorized by the 1998 Missouri General Assembly and signed into law by Governor Carnahan, will begin serving students. These programs are the Advantage Missouri and the MOSTARS Higher Education Savings Programs.

The Advantage Missouri Program will provide need-based, forgivable loans to students entering certain high demand fields. Governor Carnahan's FY 2000 executive budget included a request of $2.9 million for the Advantage Missouri Program. This level of funding will provide loans to approximately 1,200 students.

The MOSTARS Higher Education Savings Program provides certain state and federal income tax incentives for families to save for future higher education costs. The Missouri State Treasurer's Office will administer the program and implementation is scheduled so that Missouri families can begin making deposits sometime in 1999.

In addition to these three major state programs, federal, institutional, private, and other state financial assistance programs provide financial access. As a result, the CBHE continues its commitment of providing financial access to all levels of higher education.

MOSTARS

The Coordinating Board for Higher Education, in its *Blueprint for Higher Education*, emphasized the importance of improving and providing financial access for Missouri's citizens to the state's system of higher education. In response to these critical issues, MOSTARS was created by the CBHE in the fall 1997. MOSTARS' primary mission is to be a single point of statewide contact to provide postsecondary assistance to Missouri's families in three major areas: student financial assistance programs, customer services and support, and early awareness of postsecondary education. Through the state and federal student assistance programs currently administered by MOSTARS nearly 95,000 students receive grants, scholarships, and loans totaling approximately $310 million annually. MOSTARS also provides and utilizes electronic systems and software products that effectively serve all clients and support program administration. In addition, MOSTARS is currently initiating early awareness and outreach activities regarding postsecondary access for Missouri citizens.

Notwithstanding the state's effort to provide greater financial access to higher education for those students eligible for the Charles E. Gallagher Grant Program, Johnson and Katsinas in their December 1997 report *Outside Looking In: Comparing Missouri to the Nation*, note that "Missouri's policy has not historically been targeted to provide its neediest students choice as well as access." By comparison, Missouri's need-based financial aid comprised only 1.8 percent of the total mix of the federal and state financial aid package, compared to the national average of 5.7 percent. The percentage of non-need-based financial aid, 49.2 percent, was more than double the national average of 21.7 percent. Missouri ranked 31st among the 50 states in its total state investment in need-based student financial aid, as contrasted to 12th in non-need-based aid (Table 3).

Dr. Kent Halstead of Research Associates of Washington also identified the need for Missouri to address issues of financial aid for Missouri's low income students. In his report, "Financing Public Higher Education in the State of Missouri and the Role of Tuition," prepared for the Missouri Commission on the Affordability of Higher Education, Dr. Halstead writes, "Missouri's proportion of poor youth (19.9 percent) is near the national average (18.8 percent). These youth represent a very special responsibility and opportunity. Accordingly, public tuition policy must provide low access tuition at community colleges for starting students from moderate and low income families, together with sufficient financial aid to allow students from the poorest families to escape excessive work requirements. Aid must also extend to low income students meeting the higher entrance requirements and costs at state four-year institutions."

Table 3

The Mix of State Student Financial Aid: Missouri and the U.S., 1995

	Need-Based	Non-Need Based	Pell Grant Participation
MO	1.8%	49.2%	25.7%
US	5.7%	21.7%	25.7%
MO as a % of U.S. Average	31.5%	227%	SAME

- **increasing the maximum award to $3,000 or one-half of an institution's tuition and required fees, whichever is less, conditional on the program being fully funded;**

The Coordinating Board's recommendations have been to fund all eligible applicants prior to increasing the award amount.

- **requiring the completion of the Coordinating Board for Higher Education's recommended high school core curriculum of grant recipients graduating from high school in the spring 1996 semester and thereafter; and**
- **requiring the task force's recommended standards for admission to teacher education programs of grant recipients admitted to state-approved teacher education programs.**

ACCESS, QUALITY, AND EFFICIENCY:

GOAL 20: (FFR) **While state funding must address the core operating budget needs of public institutions, the Coordinating Board for Higher Education shall utilize its funding recommendations, financial incentives, and rewards for performance as well as targeted funds to achieve focused institutional missions and improvements in institutional performance; such programs may include but are not limited to the following performance measures:**

- **implementing admission decisions appropriate to institutional missions;**

- **improving student performance in general education and the major field of study;**
- **increasing participation and graduation of historically underserved populations, particularly minorities, as well as increasing the proportion of faculty and staff from historically underrepresented populations;**
- **improving institutional graduation and time-to-completion rates, particularly in critical high-skill trades and disciplines;**
- **encouraging students to continue their formal education through transfer or post-baccalaureate study;**

Funding for Results (FFR), one of the board's major strategic initiatives, utilizes a select number of performance indicators based on priorities established by previous planning efforts. Beginning with FY 1994 for public four-year institutions and FY 1995 for public two-year institutions, a portion of new money has been appropriated to each institution's core budget based on the board's FFR budget recommendations. Funding for Results is intended to result in greater accountability, continuous improvement, and quality assurance. Between FY 1994 and FY 1999, $42,098,768 in FFR dollars has been added to the base budgets of Missouri's public four-year colleges and universities, representing 16.7 percent of new money allocated. Included in this amount is a $2.7 million annual allocation for teaching/learning improvement projects. Between FY 1995 and FY 1998, public two-year institutions have received a $7,174,671 increase in their base budgets in FFR dollars, representing a 13.4 percent increase in new money. Included in this amount is $1.5 million dedicated annually to teaching/learning improvement projects.

A description of the Funding for Results elements for both two- and four-year institutions is included in Appendix 4.

- **developing distinctive programs and more focused missions; and**

Mission review is one of five strategic planning initiatives of the Missouri Coordinating Board for Higher Education included in its *Blueprint for Missouri Higher Education*. Through this process, institutions develop plans to focus on what they do well and need to enhance, what they are not doing but need to do, and what they currently do that should be eliminated. Strategies to help institutions become more distinctive in what they are and do are mutually identified by the institution and the Coordinating Board. Performance measures are established to assess mission achievements and demonstrate accountability. Mission enhancement plans are funded through the reallocation of institutional funds and, for selected strategies, state appropriations recommended by the Coordinating Board.

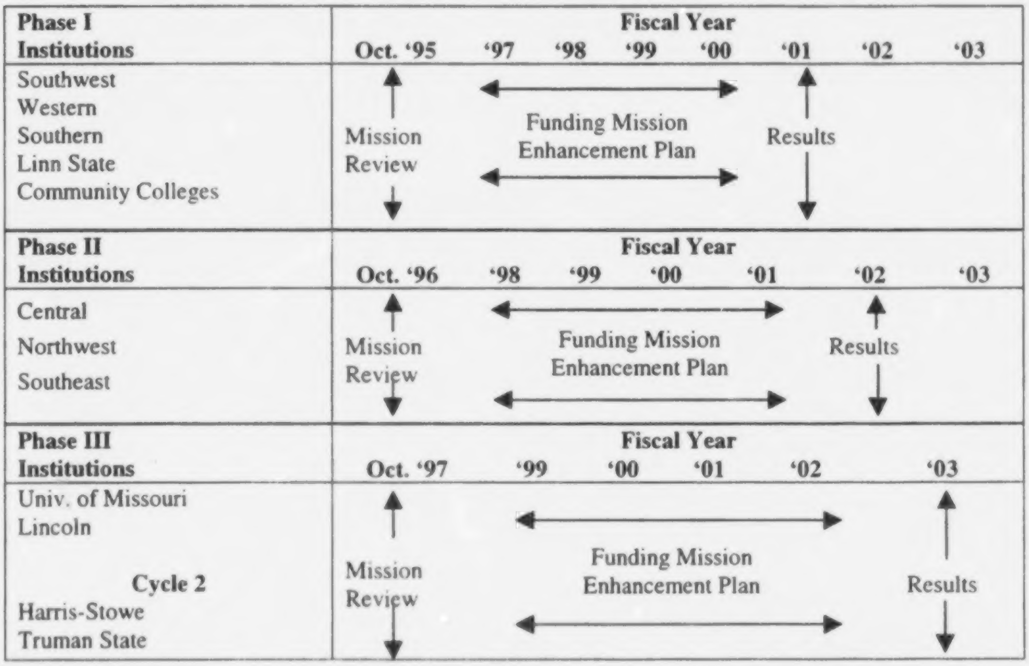
Mission enhancement encourages specialization by minimizing duplication of programs and emphasizing programmatic excellence. In addition, it addresses specific demographic and industrial needs of the region and state, develops institutional academic themes, and emphasizes partnerships.

Each of Missouri's colleges and universities has established a unique mission that enhances the quality and efficiency of the entire system. As institutions sharpen their areas of distinctiveness and focus their missions, Missourians will have access to a wide variety of high-quality, distinctive programs.

In response to the passage of Senate Bill 340, Section 173.030 (7) RSMo, the Coordinating Board for Higher Education adopted, on June 15, 1995, a three-phase schedule to review each public institution's mission (Chart 39).

Chart 39

Mission Review Schedule



A description of the institutions' mission and role in the state's colleges and universities adopted as part of the board's *Blueprint for Higher Education* is included in Appendix 5.

A significant portion of the CBHE's recommended FY 1999 increase for the general operations of the state's public four-year colleges and universities has been targeted to help the institutions achieve their respective missions. For FY 1999, as a result of mission review, the CBHE recommended a total of $25,542,759 in mission enhancement funds for Missouri's public four-year colleges and universities:

Phase I Institutions	
Southwest Missouri State University	$2,400,000
Missouri Southern State College	$531,131
Missouri Western State College	$653,750
Phase II Institutions	
Central Missouri State University	$1,875,000
Northwest Missouri State University	$1,108,500
Southeast Missouri State University	$1,525,000
Phase III Institutions	
University of Missouri	$15,000,000
Lincoln University	$697,500
Phase III-Cycle 2 Institutions	
Harris-Stowe State College	$501,878
Truman State University	$1,250,000

After the first year of mission review, funding recommendations to assist institutions in meeting their agreed upon missions are based partially on annual performance reports the institutions make to the CBHE on the progress and success in achieving their missions.

- **achieving administrative efficiency goals.**

The CBHE annually reports the number of full-time employees by occupational category at public and independent institutions in the *Statistical Summary of Missouri Higher Education*. This report is used by colleges and universities to monitor their staffing patterns.

Efforts are being undertaken to improve the transfer and exchange of student academic transcripts among institutions based on electronic data interchange (EDI) standards. Currently, Bob Lowe from the Metropolitan Community Colleges is leading a statewide effort to implement SPEEDE/ExPRESS, a nationally developed system to electronically transfer academic records between high schools and colleges, or between two colleges, using EDI standards.

Several other efforts are employed by the state's colleges and universities to become more efficient. These include contracting for their food services and plant maintenance programs, cooperatively supporting MOREnet (the state's backbone to the national Internet) and working to implement MOBIUS, the state's common library platform which will enable them to share their respective library holdings as though their entire collections were one.

Several Missouri institutions have received state and national recognition for their efforts to become more efficient and to promote efficiencies within the higher education delivery system through collaborative planning and partnerships.

A listing of existing consortia and collaborative partnerships is included in Appendix 6.

QUALITY:

GOAL 21: All state-owned higher educational facilities will be adequately maintained, and modern equipment widely used by business and industry will be available to Missouri's students and faculty.

Since 1993, the Missouri General Assembly has appropriated over $487 million for capital renovation and new construction at Missouri institutions of higher education. In addition to these capital projects, Missouri has continued to include ongoing maintenance and repair funding in the operating budgets of the institutions. For FY 1999, $26,054,859 was appropriated for this purpose. For four-year colleges and universities, the goal of the CBHE has been to achieve an appropriation of 1.5 percent of facility value ($30,614,676 for FY 2000) for maintenance and repair purposes. For FY 2000, the governor recommended and the House of Representatives has concurred that $26 million be reserved in the operating budget for maintenance and repair.

Although the facilities of the community colleges are not owned by the state, the community college funding statutes do recognize the need for funding maintenance, repair, and equipment in an amount up to 10 percent of the state aid appropriations for the colleges. For FY 1999, the community college budget included $5,490,739 for this purpose. The CBHE recommendation for FY 2000 suggests that the appropriation be increased by $369,080 to $5,859,819.

For FY 2000, the CBHE requested and the governor recommended, a one-time appropriation of $5,859,819 to assist three community colleges in the purchase of land, buildings, and equipment, and in the construction of business and technology centers. The recommended projects were selected after the CBHE assessed the top priorities of each community college.

QUALITY:

GOAL 22: **The Coordinating Board for Higher Education shall issue an annual accountability report for Missouri's system of higher education which shall describe the success of Missouri's public and independent colleges and universities in attaining agreed upon statewide goals.**
(FFR)

Each year the Coordinating Board for Higher Education produces and distributes the *Statistical Summary of Missouri Higher Education* and the *Directory and Statistical Summary, Proprietary Sector of Missouri Postsecondary Education,* as well as its *Annual Report* to the governor, legislators, and persons interested in Missouri higher education.

A performance indicator report was first presented to the board in October 1993, showing selected baseline data for the performance goals; and in June 1995, an updated report was presented showing the progress public four-year colleges and universities were making toward the attainment of selected goals. In February and April 1996, the *Progress Toward the Statewide Public Policy Initiatives and Goals for Missouri Higher Education* was reviewed and discussed by the CBHE Presidential Advisory Committee. Subsequent progress reports were presented to the CBHE Presidential Advisory Committee and the Coordinating Board in April 1997 and 1998 as this report is being presented in April 1999.

Funding for Results, the Coordinating Board's performance funding program, links budget recommendations with assessment and accountability. Additional information can be found under Goal 20 in this document. With support from a Fund for the Improvement of Postsecondary Education (FIPSE) grant, the CBHE began working with institutions in 1994 to refine and expand its performance funding program. Incentives are provided to institutions for designing and implementing a mission-based performance funding program as a way to stimulate and document improvements in teaching and learning on each campus.

The campus FFR program has resulted in the sponsorship of many innovative teaching/learning initiatives on 29 public two- and four-year campuses. Beginning with the FY 1999 budget, two additional campuses, Linn State Technical College and Blue River Community College of the Metropolitan Community Colleges, began receiving funds to design and implement teaching/learning improvement projects.

An accountability report for the 1997-98 campus FFR projects can be found in Appendix 7.

Many institutions have chosen to use FFR campus funds to support multiple projects. Almost all institutions target general education improvements while about half emphasize projects for freshmen. While the long-term impact of this initiative is not known, initial results suggest an increased interest and enthusiasm by faculty. Literally hundreds of faculty and thousands of students have benefited from the opportunity to explore new methods of promoting student success. Selected results from the 1997-98 accountability reports suggest a positive influence on faculty morale, improved retention, improved writing and critical thinking skills, and higher grades and completion rates from students participating in supplemental instruction programs.

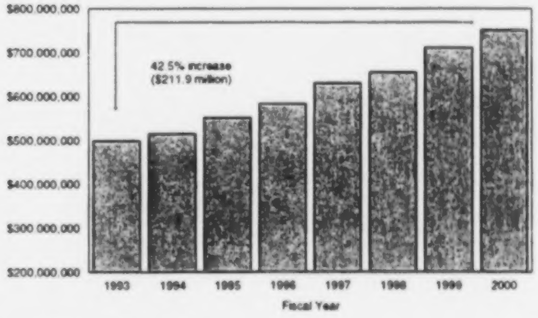
QUALITY:

GOAL 23: **Every effort will be made to attain sufficient additional funding for Missouri's public two- and four-year colleges and universities and the Missouri Student Grant Program to implement the goals and objectives of this report; however, many of these goals and objectives require few if any additional resources and should be pursued regardless of the attainment of additional funding.**

As seen in Charts 40 and 41, state appropriations for Missouri public higher education institutions increased by more than $277.4 million between fiscal years 1993 and 1999. That increase consists of $211.9 million for public four-year institutions and $65.5 million for public two-year colleges. Appropriation recommendations in FY 2000 would add another $50 million.

Chart 40

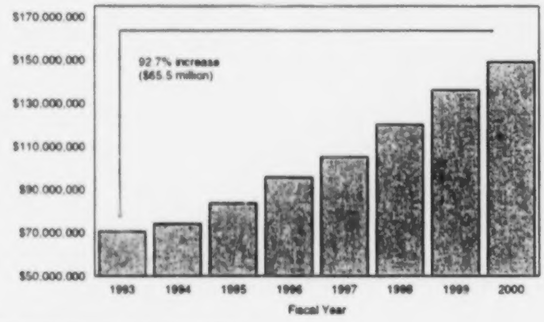
State Funding for Four-year Colleges and Universities



Source: Office of Administration, Budget and Planning

Chart 41

State Funding for Community Colleges



FY 1997-2000 includes funding for Technical Education (RTECs)
Source: Office of Administration, Budget and Planning

Missouri's current funding model permits public institutions to request funding on the basis of several components, including a core appropriation that maintains funding of programs at existing levels, an inflation adjustment for education and general expenses, program improvements and strategic enhancements. The FY 2000 budget request is organized around several strategic initiatives. Those initiatives and the funding request for each include:

$20,645,000 for the *State Plan for Postsecondary Technical Education;*

Appropriate telecommunications access for education and research and state-of-the-art information technology, including $5,600,000 for instructional technology at the community colleges, $3,401,845 for continuing development of a common library platform, and $14,360,000 for operation and development of Missouri's Research and Education Network (MOREnet);

$14,107,436 for performance funding for two- and four-year institutions;

$26,915,576 for mission enhancements at all public four-year colleges and universities; and

$120,663 to expand and enhance community college programs to unserved geographic areas outside their taxing districts.

EFFICIENCY:

GOAL 24: Missouri will have a system of governance for postsecondary education that will provide a coordinated, balanced, and cost-effective delivery system of the highest quality while recognizing the relative merits of institutional autonomy and the necessity of achieving statewide goals by:

- **differentiating institutional missions on the basis of differing admission policies, providing incentive funds to assist both public and independent institutions in meeting statewide needs, and rewarding institutional successes;** See Goal 20.

- **benefiting from the strength of its independent colleges and universities through contracts for specific programs and services consistent with statewide needs; and**

Through the provisions of both the Academic Scholarship Program and the Charles E. Gallagher Grant Program, the CBHE is providing financial access for thousands of Missouri students at the state's independent colleges and universities.

In addition, Missouri's independent institutions are actively engaged with the state's public institutions and the Coordinating Board in developing and implementing new and enhanced programs for the state's system of public and independent postsecondary education. Examples of the partnerships between the public and independent sectors include collaboration on the development and implementation of:

- new academic program review and approval procedures;
- degree credit transfer and program-to-program articulation guidelines;
- a common library platform involving joint state/institutional funding (estimated to be $15 million over the first five years);
- enhanced MOREnet capacity for service to institutions ($10.7 million state request for FY 1999); as well as
- participation on the board's
  Presidential Advisory Committee,
  K-16 Coalition,
  Missouri's Commission on the Affordability of Higher Education,
  Committee on Technology and Instruction, and
  Committees of academic, fiscal and campus institutional research officers.

MOSTARS provides quality customer services to all Missouri postsecondary institutions participating in the state and federal student assistance programs. These services enable the participating institutions to effectively administer their student assistance programs. All institutional sectors are also represented on MOSTARS' statewide student financial aid advisory council.

- **encouraging, supporting, and rewarding its institutions of higher education for increasing their involvement in resource sharing and cooperative ventures with other Missouri schools, colleges, universities, businesses, and industries as well as with other institutions, nationally and internationally.**

In 1996, the board received a resource group report containing recommendations and guiding principles for a statewide telecommunications-based delivery system. In 1997, the Telecommunications Advisory Group developed implementation strategies based on the concepts presented to the CBHE in the 1996 report. Principles of good practice were suggested to promote cooperation among members of regional planning organizations, to maximize the accessibility and quality of offerings, and to reduce unnecessary program duplication. The resource sharing opportunities presented by telecommunications technologies are indeed limited only by the creativity and imagination of the faculties at the state's public and independent colleges and universities.

The board's Committee on Technology and Instruction was established to pursue the recommendations contained in the 1996 and 1997 telecommunications-based delivery system reports, as well as to explore and recommend strategies and funding recommendations to utilize technology to accelerate learning on-campus and provide greater access to the state's system of higher education from off-campus.

Missouri's higher education institutions are also expanding their involvement in cooperative partnerships for the delivery of academic degree programs. A number of regional consortia have responded to require needs to provide greater access to educational programs that would not have been feasible if sponsored by only one institution. In addition, many more partnerships exist between public institutions, between public and independent institutions, and between public institutions and area vocational technical schools which focus on a particular program. Appendix 6 lists current collaborative efforts to provide greater access to the state's system of higher education through consortia and institutional partnerships.

Appendix 1

Other Elements of the State Plan for Postsecondary Technical Education

Other Elements of the State Plan for Postsecondary Technical Education

Vocational Education Enhancement Grants

Missouri has made a significant effort to exploit the benefits of federal and state Carl Perkins Vocational Education dollars to advance selected secondary and postsecondary vocational and technical programs among 424 comprehensive high schools, 57 area vocational technical schools, 7 four-year institutions, and 12 community college service regions. Distributions from the Division of Adult and Vocational Education at the Department of Elementary and Secondary Education are used to enhance existing vocational and technical programs as well as invest in new high-demand occupational training. In FY 1999, over $15 million in state funds were distributed to the vocational technical geographic access points across the state.

Vocational Education Equipment Grants

In FY 1999, the Division of Adult and Vocational Education at the Department of Elementary and Secondary Education distributed $3.5 million to area vocational technical schools and community colleges to upgrade, replace, or purchase new vocational education equipment.

Linn State Technical College

In February 1998, Linn State Technical College (LSTC) officially became a candidate for accreditation with the North Central Association, thereby bringing LSTC one step closer to becoming an accredited postsecondary institution providing advanced two-year technical training programs. LSTC has received CBHE approval to convert the heavy equipment maintenance and repair program from a certificate to an associate of applied science degree. The CBHE also approved, or is pending approval of, the following new programs by the end of FY 1999: electrical distribution, civil and construction engineering technology, network systems engineering technology, and integrated manufacturing engineering technology at the Mexico, Missouri Advanced Technical Center.

Construction and Remodeling of Vocational and Technical Facilities

As a result of CBHE's *State Plan for Postsecondary Technical Education* initiatives, the public community colleges and AVTSs are becoming full partners in delivering postsecondary technical education beyond the immediate confines of the community college district. High quality, accessible occupational training is vital to prepare individuals for employment or to upgrade their job skills. For the last two fiscal years, Governor Carnahan has recommended funding for projects to improve the quality of current vocational technical programs, responding to increasing enrollment, and enabling area vocational technical schools to be more responsive to their respective service area training needs. In FY 2000, the governor recommends:

- $2 million to renovate Graff Career Center at Ozarks Technical Community College;
- $800,000 to construct a technical education facility at Moberly Area Community College;
- $650,000 to construct a new area vocational school in Cape Girardeau;
- $50,000 to construct a storage facility for vocational technical programs at Crowder College;
- $35,000 to construct a storage facility and expand the building trades program laboratory at Lex La-Ray Technical Center in Lexington; and
- $35,000 to renovate facilities that house the industrial electronics, health occupations, welding, and auto mechanics programs at the Pemiscot County Area Vocational School at Braggadocio.

Mission Review and Enhancement of Selected Four-year Colleges and Universities

The state's baccalaureate institutions have an essential role in complementing the implementation of the *State Plan for Postsecondary Technical Education*. Five four-year institutions, in particular, are strategically located and have agreed upon mission review and enhancement elements to assist with selected baccalaureate and master's degree programs central to the state plan. These institutions include Missouri Western State College, Central Missouri State University, Southeast Missouri State University, and Southwest Missouri State University-West Plains (two-year programs), and the University of Missouri-Rolla.

H.B. 1456 (Out-of-Taxing-District and Off-Campus Outreach Centers)

In FY 1999, the Missouri General Assembly enacted legislation to direct state aid to selected off-campus and out-of-taxing-district instructional locations provided by public two- and four-year institutions where prior need and continuous operations are evident. The General Assembly has appropriated dollars to support centers such as the Bootheel Education Consortium in Malden (operated by Southeast Missouri State University and Three Rivers Community College); Nevada (operated by Crowder College in partnership with Cottey College, Southwest Missouri State University, and UM Extension); Perryville/Serona (operated by Mineral Area College); Lebanon (operated by Ozarks Technical Community College); and Kirksville (operated by Moberly Area Community College).

For FY 1999, the General Assembly authorized state aid for the following additional sites: Mexico (operated by Moberly Area Community College, Linn State Technical College, and UM Extension); Camdenton (operated by State Fair Community College and Central Missouri State University); Rolla (operated by East Central College); and Cassville (operated by Crowder College).

Missouri Customized Training Program

Through the cooperative efforts of the Missouri Division of Job Development and Training (JDT), Department of Elementary and Secondary Education (DESE), the CBHE, community colleges, and area vocational technical schools, more than $20 million has been invested in customized training each of the last three years. Companies in Missouri have access to a wide range of training services designed to meet their specific needs. By combining the sources of funding and technical education delivery infrastructure, the agencies attempt to serve as many employers and employees as possible. Table 4 demonstrates the extent to which customized training was delivered to Missouri employers across the state from FY 1992 through FY 1998.

Table 4
Missouri Firms and Employees Served Through Customized Training

Fiscal Year	Firms Served	Employees Served
FY 1992	155	47,000
FY 1993	176	39,575
FY 1994	188	27,000
FY 1995	147	13,523
FY 1996	187	10,234
FY 1997	295	19,225
FY 1998	JDT: 240 DESE: 199 *Total: 439*	JDT: 33,977 DESE: 29,551 *Total:63,528*
FY 1999 (projected)	400	65,000

Appendix 2

1997-98 Campus-based Reviews Academic Program Areas

1997-98
Campus-based Reviews
Academic Program Areas

Central Missouri State University

BS/BA	Chemistry
BS/BA	Physics
BA/BSE/MA	English
MA	Teaching English as a Second Language
BA/BSE	Spanish
BA/BSE	French
BA/BSE	German
Non-major	Religious Studies
BS/BA/MA	Economics
BSBA	Finance
BS/BA	Physical Education
MS	Physical Education, Exercise and Sport Science
BS	Speech Pathology
MS	Speech Pathology and Audiology
BSE	Secondary Education with option in Technology Education
MS	Industrial Vocational Technical Education
MS	Industrial Technology
MS	Industrial Management

Harris-Stowe State College

BSED	Elementary Education
BSED	Middle School/Junior High Education
BSED	Early Childhood Education
BSED	Secondary Education
BSBA	Business Administration
BS	Health Care Management
BS	Urban Education
BS	Criminal Justice (plus two)

Lincoln University

BS/BSED	Art
BA/BSED	History
BA	Political Science
BA/BS	Psychology
BS/BS	Sociology
BA/BSED	English

BA	Foreign Languages is currently inactive and is being restructured

Missouri Southern State College

BSE	Early Childhood Education
BSE	Elementary Education
BSE	Middle School Education
BSE	Secondary Education
BS/BA	Psychology
BS	Health Promotion and Wellness

Missouri Western State College

BS	Computer Science
BS	Mathematics
BS	Computer Information Systems
Minor	Physics
BS	Physical Education
BS	Recreation Administration
Minors	Recreation Administration, Athletic Coaching and Wellness, and Gerontology
BSN	Nursing
AAS	Health Information Management

Northwest Missouri State University

BSED	Elementary Education (1-6)
BSED	Middle School Education (5-9)
BSED	Learning Disabilities (K-12)
BSED	Mental Disabilities (K-12)
MSED	Teaching: Elementary (Self-contained)
MSED	Teaching: Elementary (Subject Area Concentration)
MSED	Teaching: Early Childhood Education
MSED	Teaching: Middle School
MSED	Reading
MSED	Learning Disabilities: Elementary
MSED	Learning Disabilities: Elementary and Secondary
MSED	Learning Disabilities: Secondary
MSED	Mentally Handicapped: Elementary
MSED	Mentally Handicapped: Elementary and Secondary
MSED	Mentally Handicapped: Secondary
MSED	Teaching: Educational Uses of Computers
MSED	Administration and Supervision: Elementary
MSED	Administration and Supervision: Secondary
Ed.S	Superintendent

Ed.S	Secondary School Principal
Ed.S	Elementary School Principal
MSED	Teaching: Secondary
BA/MA/BSED	English (9-12)
MSED	English (Option I)
MSED	Teaching English, Secondary (Option II)
BA/BS/BSED	French (K-12)
BA/BS/BSED	Spanish (K-12)

Southeast Missouri State University

MA	Community Counseling
BS	Health Management: Athletic Training
BS	Recreation
BA/BSED	English
BA/BS	American Studies
Minors	Literature, Women's Studies, and Writing
AAS	Computer Technology
BS	Industrial Technology

Southwest Missouri State University

BS/BA	Economics
BA/BSED	History
BA	Philosophy
BS/BA	Political Science
BS/BA	Public Administration
BA	Religious Studies
BS/BA	Anthropology
BA	Sociology
BA	Antiquities – An Interdisciplinary Program
Minors	Military Science - undergraduate
	African American Studies - undergraduate
	Gender Studies - undergraduate
	Defense and Strategic Studies - graduate
	History - graduate
	Public Administration - graduate
	Religious Studies - graduate

Truman State University

BA	Russian
BSN	Nursing
BA/BS/MA	Communication Disorders
MAE	Education

BA	German
BA	Counseling
BA/BM/MA	Music
BA	Art History

University Of Missouri-Columbia

BS	Agricultural Education
BS	Agricultural Journalism
BS	General Agriculture
AB/BS/MS/PHD	Chemistry
AB/MA	German
AB	Russian
AB	Religious Studies

Center for Economic Education

Center for National Food and Agricultural Policy Research

University Of Missouri-Kansas City

BA/BS	Geography
BS	Geology
BS	Earth Sciences
MS	Urban Environmental Geology
Ph.D.	Interdisciplinary (with Geography and Geology)
BA/BS/MS/Ph.D.	Physics
BA/MA	Political Science
Ph.D.	Interdisciplinary (with Political Science, Economics and Sociology)
BS/MS	Accounting
BBA/MBA	Business Administration
MPA	Public Administration
BA	Elementary Education
BA	Middle School Education
BA	Secondary Education
BA	Physical Education
MA/EDSP	Curriculum and Instruction
MA/EDSP	Educational Administration
MA	Educational Research and Psychology
MA	Special Educational
MA/EDSP	Counseling and Guidance
MA/EDSP	Reading Educational
EDD	Education
Ph.D.	Counseling Psychology
BSP/PharmD	Pharmacy
MS	Pharmaceutical Science

Center for Environmental Studies

Midwest Center for Nonprofit Leadership
National Center for Managed Health Care Administration
Center for Direct Marketing Education and Research
Center for Small Business and Entrepreneurship
UMKC Center for International Business

University Of Missouri-Rolla

BS/MS/Ph.D.	Computer Science
BS/MS/Ph.D.	Ceramic Engineering
BS/MS/Ph.D.	Geological Engineering
BS/MS/Ph.D.	Petroleum Engineering
BS/MS/Ph.D.	Metallurgical Engineering
BS/MS/Ph.D.	Mining Engineering
BS/MS/Ph.D.	Nuclear Engineering
BA	Philosophy
Minors	Art, Music, Theatre, Speech and Media Studies, Education, French, German, Spanish, Russian, and Sociology/Anthropology
BA/BS	Psychology
BA/BS	English

Intelligent Systems Center: Interdisciplinary Program

University Of Missouri-St. Louis

BA	Anthropology
BA/BS/MS/Ph.D.	Biology
BA/BS/MA	Economics
BA/MA/MFA	English
BA	French
BA	German
BA	Spanish
BA/BS/MA	Sociology
BSAcc/MAcc	Accounting
BSBA	Business Administration (at residence centers)
BSBA/MBA	Business Administration
BSCIE	Civil Engineering
BSEE	Electrical Engineering
BSME	Mechanical Engineering

The Center for International Studies
The Center for Academic Development
The Center for Excellence in Urban Education
Computer Center
Division of Student Affairs

Appendix 3

Disciplines Determined in 1992 to be Critical to Missouri's Future

Disciplines Determined in 1992 to be Critical to Missouri's Future

Less than one-year certificate programs
More than one-year, less than two-year certificate programs
More than two-year, less than four-year certificate programs
Electromechanical Instrumentation (CIP 15.04)
Environmental Control Technology (CIP 15.0506-15.0507)
Drafting-CAD (CIP 48.0199)
Health-related (CIP 51.01-51.10)
Nursing (CIP 51.16)

Associate degree programs
Electromechanical Instrumentation (CIP 15.04)
Environmental Control Technology (CIP 15.0506-15.0507)
Drafting-CAD (CIP 48.0199)
Precision Metal Production (CIP 48.05)
Health-related (CIP 51.08-51.10)
Nursing (CIP 51.16)
Life Sciences (CIP 26.01-26.07)
Mathematics (CIP 27.01-27.05)
Physical Sciences (CIP 40.01-40.08)

Baccalaureate degree programs
Foreign Languages (CIP 16.03-16.12)
Health-related (CIP 51.08-51.10)
Nursing (CIP 51.16)
Life Sciences (CIP 26.01-26.07)
Mathematics (CIP 27.01-27.05)
Physical Sciences (CIP 40.01-40.08)

Master's degree programs
Foreign Languages (CIP 16.03-16.12)
Health-related (CIP 51.08-51.10)
Nursing (CIP 51.16)
Life Sciences (CIP 26.01-26.07)
Mathematics (CIP 27.01-27.05)
Physical Sciences (CIP 40.01-40.08)
Engineering (CIP 14.02-14.32)

Doctoral degree programs
Foreign Languages (CIP 16.03-16.12)
Life Sciences (CIP 26.01-26.07)
Mathematics (CIP 27.01-27.05)
Physical Sciences (CIP 40.01-40.08)
Engineering (CIP 14.02-14.32)

Appendix 4

Description of the Funding for Results Elements for Both Two- and Four-year Institutions

Funding for Results Elements

Assessment of Graduates

Description: Institutions are encouraged to engage in systematic assessment of student outcomes and to build assessment programs on campus which will meet North Central Association standards. The allocation is based on a per capita headcount.

Public Four-year: This element has been included each year beginning with the FY 1994 budget recommendation. Initially, assessments of student outcomes of general education and the major were counted. Beginning with the FY 1997 budget recommendation, only general education assessment qualifies for this element. The allocation amount started at $400 per assessed graduate (for FY 1994) and is now $100 per assessed graduate. Institutions are permitted to use either nationally recognized or locally developed instruments.

Public Two-year: This element was introduced with the FY 1997 budget request. In the first year, institutions were asked to indicate how many students they expected to assess. The element is now based on actual assessment rather than planned assessment. Assessments using nationally recognized or locally developed instruments of general education qualify. Initially, the allocation amount was set at $10 per student representing a symbolic commitment to integrate an assessment element into the FFR program for two-year institutions. The allocation was increased to $35 per student for FY 1998 and FY 1999. For FY 2000 the allocation was again increased to $50 per assessed graduate.

(See Goal 12 for results.)

Success of Underrepresented Groups

Description: This element relates to the state's goal to increase the participation and success of historically underrepresented populations. The allocation is based on a per capita headcount.

Public Four-year: This element has been included each year beginning with the FY 1994 budget recommendation. For FY 1994, only African American graduates at the baccalaureate-degree level were included. Beginning with FY 1996, the element was expanded to include Hispanic and Native American graduates and to include any degree level. For the FY 1998 budget recommendation, this element was again expanded to include a cohort analysis of FY 1993 financially at-risk students who were re-enrolled for at least 72 hours of coursework at the baccalaureate level. By FY 1999, all baccalaureate degree recipients who were determined to have a low socioeconomic status (SES) profile at point of entry, as well as minority students without a low SES from targeted groups determined to be underrepresented, were included. Minorities with a graduation distribution lower than the group's percentage in the Missouri population 18 years old or older are considered underrepresented. Beginning with the FY 1994 recommendation, the allocation was $1,000 for each graduate in one of the targeted groups. Beginning with FY 1998, this amount was reduced to $600 for each graduate.

Public Two-year: This element has been included each year beginning with the FY 1995 budget recommendation. African American graduates with associate degrees or certificates of one year or greater were included. Beginning with FY 1996, the element was expanded to include Hispanic and Native American graduates. For FY 1998, this element was again expanded to include a cohort analysis of FY 1993 financially at-risk students who had graduated. Beginning with FY 1999, the expanded definition of this element was treated similarly to that of the four-year institutions. The allocation began at $500 for each graduate and was reduced to $300 beginning with FY 1997.

(See Goal 3 for results.)

Performance of Graduates

Description: The inclusion of this element represents movement from quantity counts to qualitative measures. This element has emphasized student outcomes on assessments of general education and in the major. The allocation is based on a per capita headcount.

Public Four-year: This FFR element was first introduced in the FY 1995 budget recommendation. The number of baccalaureate graduates who have been assessed using a nationally normed assessment of general education and/or in the major and who scored at or above the 50th percentile are counted. Also included are baccalaureate graduates who passed national licensure, certification, or registration examinations which do not have national norms and baccalaureate graduates who received awards in a national or state competition in fields which do not have national standardized assessments. The allocation started at $1,000. Beginning with the FY 1996 budget recommendation, the amount was reduced to $500 for each graduate who met the above standards.

Public Two-year: The element was first introduced in the FY 1998 budget recommendation. In the first year, performance was limited to pass scores on national examinations that led to licensure, certification, or registration. Beginning with FY 1999, this element was expanded to include each Associate of Arts (AA) graduate who scored at the 50th percentile on a nationally normed assessment of general education. The allocation started at $35 for each graduate who met the standard. Beginning with FY 2000 the amount was increased to $100 per student meeting the standard.

(See Goals 12 and 15 for results.)

Freshman Success Rates

Description: This element relates to the state's goal of increasing the portion of first-time, full-time, degree-seeking freshmen who complete their first academic year with 24 credit hours and a cumulative grade-point average of 2.0 or better. This element reinforces institutions for enrolling students, full-time, who have a high likelihood of being able to succeed in making timely academic progress toward completion of a degree. The allocation is based on the percent of success an institution has in meeting its targeted goal.

Public Four-year: This element was introduced with the FY 2000 budget recommendation. Emphasis is placed on the importance of the freshman year. The allocation is based on a cohort analysis and uses the percent of an institution's first-time, full-time, degree-seeking freshmen who met the standard multiplied by a percent of the funding recommendations for on-campus instruction.

Public Two-year: This element was introduced with the FY 2000 budget recommendation. Emphasis is placed on the importance of the freshman year. The allocation is based on a cohort analysis and uses the percent of an institution's first-time, full-time, degree seeking freshmen who meet the standard multiplied by a percent of the funding recommendations for on-campus instruction.

(See Goal 8 for results.)

Quality of Prospective Teachers

Description: This FFR element relates to the state's goal to have all newly certified public school teachers enter the profession as highly qualified as possible. The allocation began as a per capita headcount, but is now based on the percentage of each institution's success in meeting the stated goal.

Public Four-year: This element was introduced with the FY 1996 budget recommendation. Emphasis is placed both on the preparation level of entering students and the performance of graduates on exit examinations. Target goals are to have 90 percent of entering students with an ACT composite score at the 66th percentile or a 265 on each subtest of the College Basic Academic Subjects Examination (C-BASE) and to have 80 percent equal or exceed the national average on the National Teacher Examination (NTE). The allocation began with a per capita headcount for each graduate who met the minimum standard for entry and exit scores. Beginning with FY 1999, the allocation was based on the percentage of each institution's graduates who met entry and/or exit standards multiplied by a percent of the funding recommendations for on-campus instruction.

(See Goal 4 for results.)

Quality of New Graduate Students

Description: This FFR element relates to the state's goal to have graduate programs at Missouri's institutions recognized nationally as being among the best in the United States. The allocation is based on a per capita headcount.

Public Four-year: This element was introduced with the FY 1996 budget recommendation. Institutions are encouraged to require students to submit scores on appropriate national examinations, *e.g.*, GRE, MAT, LSAT, in the admissions process. The target goal is for 66 percent of entering graduate students to score above the 50th percentile on the respective examination. The allocation is $500 for each new graduate student who meets the standard.

(See Goal 16 for results.)

Quality of New Undergraduate Students

Description: This element supports the state's priority for increased efficiency and quality and relates to the state's goal concerning completion of a 16 unit high school core curriculum as an entrance requirement for all public four year institutions. The allocation is based on the percent of an institution's success in meeting the state goal.

Public Four-year: This element was introduced with the FY 2000 budget recommendation. Institutions are encouraged to implement admissions policies which send a message to prospective students and their parents of the importance of preparing for college. The target goal is for 100 percent of all first-time, full-time degree seeking students graduating from high school after 1996 to complete the recommended 16-unit high school core curriculum. The allocation based on the percentage of each institution's graduates who completed the core curriculum multiplied by a percent of the funding recommendations for on-campus instruction.

(See Goal 1 for results.)

Attainment of Graduation Goals

Description: This FFR element relates to the state's goal to increase an institution's graduation and time-to-completion rates for first-time, full-time degree-seeking freshmen. Institutions are encouraged to design programs and to provide support services for the timely completion of the baccalaureate degrees. The allocation is based on the percent of success an institution has in meeting its targeted goal.

Public Four-year: This element was introduced with the FY 1996 budget recommendation. Target goals were established for each institution based on its declared admission category, i.e., open enrollment, moderately selective, selective, or highly selective. The allocation is based on a cohort analysis. Institutions are encouraged to make improvements in the graduation rate of each entering cohort of first-time, full-time freshmen. The allocation is based on the percentage of each institution's success in meeting its graduation rate goals multiplied by a percent of the funding recommendations for on-campus instruction

(See Goal 13 for results.)

Certificate/Degree Productivity

Description: This FFR element relates to the state's goal to increase the number of students graduating with certificates of one year or more and associate degrees from public two-year institutions. The allocation is based on a per capita headcount.

Public Two-year: This element has been included each year beginning with the FY 1995 budget recommendation. Certificates of one year or greater and associate degrees are included. The allocation began at $100 for each graduate, but was increased to $110 beginning with FY 1999.

(See Goal 13 for results.)

Successful Job Placement

Description: This FFR element relates to the state's emphasis on technical training at the associate degree level that prepares students for success in the workplace. The allocation is based on a per capita headcount.

Public Two-year: This element was introduced with the FY 1997 budget recommendation. Based on a 180-day follow-up study of graduates, institutions are rewarded for each graduate of a vocational program who is placed in a job-related or military-related position. The amount of allocation is $125 for each student who meets the standard.

(See Goal 12 for results.)

Transfers to Four-year Institutions

Description: This FFR element recognizes the state's priority for increased access and efficiency and relates to the state's goal for increased transfer from two- to four-year institutions. Successful transfer requires a good working relationship between both the sending and the receiving institutions. The allocation is based on a per capita headcount.

Public Four-year: ***This element was introduced for four-year institutions beginning with the FY 2000 budget request. Graduates with baccalaureate degrees who have had at least 12 hours of transcripted credit from a two-year institution are included. The allocation is set at $125 for each student who meets the standard.***

Public Two-year: This element has been included each year beginning with the FY 1995 budget recommendation. For FY 1995, the element included any student who was enrolled in the four-year sector who had some transcripted credit from a two-year institution. The element has been redefined to emphasize a minimum number of hours at the two-year institution(s) and successful graduation from a four-year institution. Graduates of four-year institutions with baccalaureate degrees who have had at least 12 hours of transcripted credit from the two-year institution(s) are included. For FY 1995, the allocation was $100 for each student meeting the standard. Beginning with FY 1998, the allocation has been increased to $125 for each student who meets the standard.

(See Goal 10 for results.)

Campus Funding for Results

Description: This FFR element represents the board's commitment to expand performance funding to the campus level. Institutions are encouraged to design and implement campus FFR programs that recognize and reward teaching/learning improvement projects. To be eligible, campus projects must involve faculty, establish agreed-upon measurements, utilize baseline data, include incentives for performance, and engage in systematic evaluation.

Public Four-year: This element was introduced with the FY 1997 budget recommendation. For FY 1997, institutions were recommended for $2,000,000 in campus FFR funds based on a formula distribution. A minimum of $75,000 was established for each campus, and the remainder was distributed based on each institution's percent of general revenue. Additional funds are recommended each budget year based on a target goal of having one percent of planned expenditures on instruction identified for teaching/learning improvement projects. In FY 1999 $2.7 million was dedicated to FFR teaching/learning improvement projects.

Public Two-year: This element was introduced with the FY 1997 budget recommendation. For FY 1997, institutions were recommended for $800,000 in campus FFR funds based on a formula distribution of $50,000 per campus. Additional funds are recommended each year based on a target goal of having one percent of planned expenditures on instruction identified for teaching/learning improvement projects. In FY 1999, $1.5 million was dedicated to FFR teaching/learning improvement projects.

(See Goal 22 for results.)

Appendix 5

Mission and Role of Missouri's Colleges and Universities Adopted as Part of the Board's *Blueprint for Missouri Higher Education*

Mission and Role of Missouri's Colleges and Universities Adopted as Part of the Board's *Blueprint for Missouri Higher Education* (October 12, 1995)

PHASE I INSTITUTIONS

Southwest Missouri State University: Master's-level, selective admissions institution with a statewide mission in public affairs, providing programmatic access for southwest Missouri, with a two-year branch campus in West Plains and a research station in Mountain Grove

- Redesign courses to reflect the emphasis on public affairs
- Develop new programs, especially at the master's-degree level, in professional education, health care, business and economic development, and the performing arts
- Expand BearNet services
- Develop new AAS-degree programs in technical education at the West Plains campus

Missouri Western State College: Baccalaureate-level, open enrollment institution focusing on access to learner success, with a special retention program, Access Plus, serving the greater St. Joseph area

- Increase participation in Excellence in Teaching initiatives
- Improve support services for and increase the academic success of at-risk students
- Partner with N.S. Hillyard Area Vocational Technical School in providing technical education and training in the St. Joseph area

Missouri Southern State College: Baccalaureate-level, moderately selective admissions institution with an international emphasis, serving the greater Joplin area

- Establish an Institute for International Studies
- Expand foreign language programs
- Internationalize the curriculum
- Enhance language learning through language immersion programs

Linn State Technical College: Associate of applied science degree-granting institution with open/selective enrollment and a mission focusing on programmatic access to highly specialized technical education

Community Colleges: Associate degree-granting institutions with open enrollment admissions specializing in workforce development; Missouri's lead institutions in delivering postsecondary technical education in partnership with the state's area vocational technical schools

PHASE II INSTITUTIONS

Central Missouri State University: Master's-level institution with moderately selective admissions and a statewide mission focusing on programmatic access to professional applied sciences and technologies

- Strengthen the "academic technology" infrastructure
- Add and enhance degree programs in advanced applied sciences and technologies at the baccalaureate- and master's-degree levels
- Strengthen the state's corps of vocational/technical education instructors
- Enhance the telecommunications network and public television station

Northwest Missouri State University: Master's-level, moderately selective admissions institution serving northwest Missouri through the extended electronic campus

- Develop a Center for the Application of Information Technology
- Develop modularized courses and make them available statewide
- Continue to apply quality concepts using the Baldrige criteria
- Facilitate the operation of the Northwest Missouri Educational Consortium

Southeast Missouri State University: Master's-level, moderately selective admissions institution serving southeast Missouri through extended partnerships, with special emphasis on experiential learning

- Emphasize experiential learning in the curriculum
- Provide distance learning opportunities through SEE-NET and the Southeast Missouri Educational Consortium
- Improve access for non-traditional and transfer students
- Establish a center of excellence in advanced manufacturing

PHASE III INSTITUTIONS

University of Missouri System: Selective statewide, land-grant university with four campuses, focusing on qualitative improvement in graduate, doctoral, and professional programs and research through endowed chairs, distinguished professorships and enriched funding for selected programs; and increasing the national stature and recognition of selected graduate programs and areas of research

University of Missouri Outreach and Extension Program: Increase access to the resources of the University of Missouri and, in partnership with the state's public and independent colleges and universities, provide financial, geographic and programmatic access to the state's system of higher education through Telecommunications Community Resource Centers (TCRCs)

University of Missouri-Columbia:

- Focus on graduate and professional education and research
- Improve health and increase agricultural productivity by emphasizing programs in the life sciences

- Apply research to social, economic, educational and governmental issues
- Increase the number and proportion of full-time faculty teaching undergraduate students

University of Missouri-Kansas City:
- Enhance graduate education programs and research
- Emphasize and strengthen programs and research in the biological and health sciences
- Enhance the national recognition of visual and performing arts programs

University of Missouri-Rolla:
- Enhance research and educational programs in manufacturing, materials, environmental and geotechnical engineering and science; infrastructure engineering; and instructional technology
- Expand technology transfer and applied research through enhanced outreach programs to Missouri businesses
- Increase program articulation with pre-engineering programs offered by the state's community colleges

University of Missouri-St. Louis:
- Strengthen programs for academically superior students and increase the involvement of undergraduates in research
- Enhance the urban context for graduate programs in health, science and technology, and education
- Increase access to baccalaureate completion programs for students at area community colleges and to master's- and doctoral-degree programs for students at area baccalaureate degree-granting colleges and universities

Lincoln University: 1890 land-grant, master's-level institution with open enrollment admissions focusing on access to learning success, serving mid-Missouri
- Enhance and increase collaborative partnerships
- Enhance programs in business administration, elementary education, criminal justice/law enforcement, and nursing science
- Develop new courses and programs to be offered at night and on weekends for residents of mid-Missouri and employees of state government
- Increase graduation and retention rates of the university's historical student clientele
- Increase statewide access to the university's African-American and ethnic studies library collections

PHASE III – CYCLE 2 INSTITUTIONS

Harris-Stowe State College: Baccalaureate-level, moderately selective admissions institution with selected applied professional programs, serving the city of St. Louis
- Add degree programs in selected applied professional fields to meet needs in the city of St. Louis

- Enhance and refine existing programs in business administration, teacher education, and criminal justice
- Increase and enhance 2 plus 2 programs with St. Louis Community College

Truman State University: Highly selective, master's-level liberal arts and sciences university, focusing on the quality of the teaching and learning environment

- Become nationally recognized as a public liberal arts and sciences university through an enhanced liberal studies program and culture
- Attract and retain quality faculty
- Enhance support to the teaching/learning process
- Increase the number and proportion of graduates going on to graduate and professional schools
- Implement a visiting distinguished scholars program

Independent Colleges and Universities and Private Career Schools
Add diversity and strength to the state's system of higher education through focused missions — from single program private career schools to baccalaureate liberal arts and sciences colleges to major doctoral and professional degree-granting research universities

Through the combined resources of strong public and private schools, colleges and universities, Missourians have access to a balanced, high-quality system of higher education.

Appendix 6

Consortia and Collaborative Partnerships

Consortia and Collaborative Partnerships

A. Regional Consortia

- The Northwest Missouri Educational Consortium, a partnership between the University of Missouri, Northwest Missouri State University, Missouri Western State College, North Central Missouri College, and five area vocational technical schools

- The Southeast Missouri Educational Consortium, a partnership between Southeast Missouri State University, Lincoln University, the University of Missouri, Three Rivers Community College, and Mineral Area College, with a particular emphasis on delivering off-campus programs

- The Nevada TeleCenter, a partnership between Cottey College, Crowder College, the Nevada R-V School District, the Nevada Area Economic Development Commission, Southwest Missouri State University, the University of Missouri-Kansas City, and the University of Missouri Outreach and Extension Program

- The Southwest Missouri State University BearNet, a distance-learning delivery system serving the southwest region of the state

- The Bootheel Education Consortium builds on the strengths of Southeast Missouri State University, the University of Missouri Outreach and Extension Program, Three Rivers Community College, and four area vocational technical schools to provide educational services to residents of that region

B. Regional Technical Education Councils (RTECs)

Under the auspices of the State Plan for Postsecondary Technical Education, Regional Technical Education Councils are offering programs involving partnerships between the state's area vocational technical schools (AVTSs), community colleges, Linn State Technical College, and other providers of technical education at the postsecondary level. These partnerships are providing geographic and programmatic access to postsecondary technical education envisioned in the State Plan for Postsecondary Technical Education by:

- leveraging funds/resources through existing service providers and funding streams, including AVTSs, comprehensive high schools, private career schools, four-year colleges and universities, apprenticeship training programs, and other two-year institutions;

- utilizing existing shops/laboratories, equipment, curriculum, faculty, alternative scheduling, and appropriate financial charge-backs; and

- building new AAS-degree programs where consideration is given to campus-based and/or out-of-district partnerships, utilizing existing core curriculum, faculty, and facilities at other providers' sites.

C. Collaborative Partnerships with Area Vocational Technical Schools and Businesses

- St. Louis Community College, in cooperation with East Central College and Rolla Technical Institute, offers occupational therapy assistant and physical therapy assistant programs in Rolla.

- Southwest Missouri State University-West Plains offers AAS-degree programs in manufacturing machine technology, welding technology, and enhanced computer technology in cooperation with area vocational technical schools.

- Missouri Western State College offers a number of technical programs in cooperation with N. S. Hillyard Area Vocational Technical School.

- Mineral Area College offers a computer networking program in collaboration with Southeast Missouri State, Arcadia Valley Area Vocational Technical School, Cape Area Vocational Technical School, Perryville Area Career Center. UniTec Career Center (Bonne Terre), Winona School District, and Perry County Sereno Higher Education Center

- East Central College offers an AAS degree in Nursing, and certificate programs in Precision Machinist and Industrial Engineering at Rolla Technical Institute.

- East Central College offers an AAS degrees and certificate programs in Drafting and Design Technology as well as Fire Technology at Rolla Technical Institute and St. Charles County Community College.

D. Plus-two Baccalaureate Programs

- Central Methodist College offers plus-two baccalaureate programs in criminal justice, business administration, accounting, elementary education, nursing, and public administration and a master's degree in elementary education on the campuses of Mineral Area College and East Central College.

- Columbia College offers plus-two programs in business administration and individualized studies in partnership with Moberly Area Community College.

- Missouri Baptist College offers plus-two programs in computer and information systems, administration of justice, business administration, and nursing in partnership with Jefferson College.

- Southeast Missouri State University offers a plus-two program in industrial technology in partnership with St. Louis Community College at Florissant Valley and University of Missouri-St. Louis.

- Central Missouri State University offers a plus-two program, BS in social work, in cooperation with Longview Community College.

- Southeast Missouri State University offers a plus-two program, BSBA in Organizational Administration, in cooperation with Three Rivers Community College and Mineral Area College.

E. Enhanced Access to Graduate Education

- Cooperative efforts by the Kansas City, Columbia, and St. Louis campuses of the University of Missouri result in doctoral-level nursing and education, and masters-level social work degrees offered on all three campuses.

- The University of Missouri-Kansas City offers MS, Nursing programs in partnership with Missouri Southern State College and Missouri Western State College, in Joplin and St. Joseph, respectively.

- Southwest Missouri State University offers a MSED degree program in elementary education and an MS, Accountancy degree at Missouri Southern State College.

- Northwest Missouri State University provides several masters-level programs at Missouri Western State College.

- The University of Missouri-Columbia offers a cooperative doctoral program in educational leadership with Southwest Missouri State University, Central Missouri State University, Northwest Missouri State University, Southeast Missouri State University, and the University of Missouri-Rolla.

- The University of Missouri-Kansas City, Northwest Missouri State University, and Missouri Western State College offer a cooperative MS, Accountancy degree in St. Joseph.

- Central Missouri State University participates in a Consortium for Doctoral Studies in Technology with Bowling Green State University, Central Connecticut State University, East Carolina University, Eastern Michigan University, Indiana State University, North Carolina A&T State University, Texas Southern University, and the University of Wisconsin at Stout to provide students an opportunity to receive a Ph.D. in Technology.

- The University of Missouri-Rolla offers a cooperative masters-level program in engineering management with Southwest Missouri State University, Central Missouri State University, Northwest Missouri State University, Southeast Missouri State University, and Truman State University.

F. Other Collaborative Efforts

- The University of Missouri-St. Louis offers baccalaureate engineering programs in cooperation with Washington University.
- St. Louis Community College offers a paramedic technology program at St. Charles County Community College.
- Jefferson College and St. Louis Community College were each granted a three-year temporary approval to offer apprenticeship training programs in cooperation with area businesses and the Department of Labor-eligible journeyman apprenticeship training schools.
- The University of Missouri-Kansas City offers a baccalaureate degree in Information Technology in cooperation with Metropolitan Community Colleges and areas businesses.
- Several institutions are exploring the potential of offering other cooperative programs.

G. MOREnet

The current effort of the public and private institutions of higher education and the CBHE regarding planning for a telecommunications-based delivery system is perhaps the most ambitious in support of this goal to identify and encourage efforts of resource sharing among the state's educational institutions.

Missouri's formation of the MOREnet consortium to provide independent and public institutions of higher education with a telecommunications network has promoted great achievements in resource sharing among the state's educational institutions. The consortium has provided technical support and network services to higher education, K-12, state government, and a variety of other supporting members. The present state appropriation request of $10.7 million for FY 1999 will bring additional support to the consortium members through a major enhancement of bandwidth capacity. MOREnet staff are presently working with member institutions to identify solutions for Internet-based interactive video applications.

H. MOBIUS-Common Library Platform

As described under Goal 16, Missouri public and independent institutions are presently working on the formation of a consortium to operate a common library platform to allow online direct patron borrowing among member institutions. The librarians have suggested that this consortium be named MOBIUS. As envisioned, this consortium would eventually allow the sharing of more than 14 million volumes with a replacement value estimated at $1 billion.

Appendix 7

1997-1998 FFR Campus Teaching/Learning Improvement Projects

1997-1998 FFR Campus Teaching/Learning Improvement Projects

Introduction

Funding For Results (FFR) Campus Teaching/Learning Improvement Projects are having a positive effect on higher education in the state of Missouri as well as on the individual campuses participating in the program. In 1997-1998, twenty-nine public two- and four-year institutions implemented campus teaching/learning improvement projects and submitted reports on them.* A review of those reports reveals that institutions are very much engaged in efforts to improve teaching/learning and that FFR provides the impetus as well as the resources for many of those efforts.

In some cases, projects involved not only selected faculty and students, but also entire institutions. Projects such as these have the effect of motivating change systemically as they reinforce institutional responsibility for improved teaching/learning. Other projects integrated faculty/staff development, technology, and innovation into a coherent activity designed to improve teaching/learning. Still other projects addressed the issue of student success by promoting activities to create positive attitudes toward the institution and by fostering connections between students, staff, and faculty.

The 1997-1998 reports on Campus Teaching/Learning Projects show the talent, creativity and ingenuity that reside within Missouri's institutions of higher education. More importantly, these reports make evident the commitment to student success that permeates Missouri's colleges and universities.

FFR Impact in Missouri

Based upon information within the reports, generalizations about the impact of Campus FFR Projects in Missouri can be drawn. FFR is producing results that penetrate all of higher education, thereby changing its face in the state. An overview of the FFR Campus Teaching/Learning initiatives shows FFR is having the following effects:

- Documenting improved student learning;
- Demonstrating broad-based accountability to the public;
- Providing institutional support for faculty/staff innovations in teaching/learning and for professional development;
- Promoting cooperation and collaboration between and among institutional departments and divisions (work units);
- Reinforcing the collective responsibility of the total institution for student academic performance;

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* Blue River Community College and Linn State Technical College did not begin campus FFR until FY '99, and therefore, are not included in this report. West Plains is included in Southwest Missouri State University's data.

- Implementing innovative approaches to support student learning
- Impacting campus culture and motivating change through new approaches to student learning; and
- Involving hundreds of faculty and thousands of students across Missouri.

In addition, FFR Campus Projects are influencing teaching/learning at each institution. The projects vary both in type and in major emphasis. Some initiatives are long-term; others are single-shot. Despite all the variation, there is a richness in their overall impact. Generalizations about specific projects completed in FY 1997-1998 include:

- Engaged students, faculty/staff, institutions, alumni and employers in activities to improve teaching/learning;
- Emphasized courses, disciplines, programs, and college-wide initiatives;
- Improved students' skills/performance and attitudes toward college;
- Emphasized elements of general education, including foundational academic success skills; improvements in writing, speaking, reading and mathematics were reported;
- Included projects in areas of academic support, general education, and the major;
- Included projects designed for both undergraduate and graduate levels;
- Improved retention and persistence to course/degree completion;
- Acknowledged different learning styles in the development of interventions;
- Improved formal and informal faculty/student interactions;
- Increased use of technology in classrooms and assignments;
- Supported innovation in teaching/learning projects;
- Used a variety of types of data to report results; and
- Positively affected faculty morale.

FFR Accountability Summaries

Attachment A provides brief descriptions of each institution's FFR initiative, giving its title, focus, and a list of results. In addition, these descriptions emphasize the key focus of each institution's approach. Greater detail about a particular project is available from the institution.

Attachment B provides a series of tables, each designed to synthesize and delineate different aspects of the FFR projects. The tables give specifics about the content of each institutional report while at the same time creating a general picture of FFR activity across a broad range of categories. The tables are useful for cross-institutional communication.

A review of Table 1 shows that seventy-six percent (76%) of the institutions funded four or more FFR projects. Clearly, the scope of influence provided by FFR is substantial.

Table 2 shows the results expected from the FFR projects. For this particular FFR cycle, ninety percent (90%) of the institutions anticipated that students would demonstrate improved skills and performance, and fifty-nine percent (59%) anticipated that student retention would be improved.

A review of Table 3 shows that colleges and universities continue to reinforce the importance of foundational skills and that technology has been given about equal emphasis in both the two- and four-year institutions. Fifty-five percent (55%) of the institutions funded projects dealing with technology.

Table 4 shows that colleges and universities target many aspects of academic life in their FFR projects. Forty-six percent (46%) of the four-year institutions have in place some type of initiative devoted to freshmen. Ninety percent (90%) of the institutions indicate general education is a major focus of their FFR project. Fifty-two percent (52%) target institutional effectiveness. As would be expected, only four-year institutions place emphasis on the major, with sixty-two percent (62%) targeting this area.

An examination of Table 5 provides an overview of some of the teaching and learning strategies being used at colleges and universities. Integration of technology into classroom activities was identified as a major strategy in fifty-five percent (55%) of the institutions. Supplemental Instruction, which continues to be a standard teaching/ learning strategy, was a key area of emphasis in twenty-four percent (24%) of the institutions.

Conclusion

Funding For Results (FFR) has proven to be a positive influence on Missouri's institutions of higher education. Numerous projects are developed and funded which involve students, faculty and, sometimes, the entire institution. Colleges and universities are demonstrating improvements in teaching/learning that are the direct result of Missouri's campus FFR initiative.

ATTACHMENT A

Summary of FFR Campus Teaching/Learning Improvement Projects

SUMMARY OF
FFR CAMPUS TEACHING/LEARNING IMPROVEMENT PROJECTS

Two-Year Colleges
1997-1998

CROWDER COLLEGE

Initiative Title: Improving English Instruction Through Computer Application

Focus: Classroom-based research activities addressing student ability goals related to the college mission, specifically improving students' oral and written communication. Project required that students in English 101 sections take their course in a classroom equipped with computers. Based on these students' performance in three areas—grades, persistence to completion of course, and computer skills acquisition—additional computer-aided English classrooms would be added.

Results:

- Grades of students taking English 101 in the computer classroom were equivalent to those of students in 1994-1995 who had taken English 101 in a traditional English classroom.
- The rate of attrition was the same for both groups of students.
- Faculty increased the required number of revisions for papers of students in the computer classroom.
- All faculty teaching in the computerized classroom now use peer critique as part of the evaluation of writing.
- Unable to support the hypothesis that faculty teaching in the computerized classroom provide students more feedback.

EAST CENTRAL COLLEGE

Initiative Title: Supplementary Instruction

Focus: Improved student performance in General Biology and U.S. History Since 1877 using one of two forms of supplemental instruction.

Results:

- Ninety percent of the students participating in at least 50 percent of the supplemental instruction sessions of U. S. History Since 1877 completed the course, but only 72 percent of the other students completed the course. (No results for General Biology because of low participation.)
- Students participating in at least 50 percent of the supplemental instruction sessions of U. S. History Since 1877 earned a higher course grade point average than the other students.

JEFFERSON COLLEGE

Initiative Title: 1) Reading for Results
2) Graphics Calculators for College Algebra

Focus: Using critical reading interventions to obtain improved critical reading and thinking skills in targeted reading-intensive courses. To see if students using graphics calculators in college algebra performed better than students in the traditional college algebra course.

Results: ***Reading for Results***

- Student retention rates were higher in the FFR cohort than in the general college population.
- There was no statistically significant difference in critical thinking pre- and post-test scores for the FFR cohort.
- There was no statistically significant difference in critical thinking scores on the CAAP critical thinking test between the students in the FFR cohort and the general college population.
- There was not a statistically significant difference in results of the pre-and post-survey to measure increase in the rates of self-reported desirable reading behaviors.

Graphics Calculators for College Algebra

- Withdrawal rates in the graphics calculator courses were lower (19.6%) than in the traditional college algebra courses (22.2%).
- Student performances on the 22 course objectives were measured and compared between the graphics calculator groups and the traditional algebra groups with the following results. On 15 objectives, a higher proportion of students demonstrated successful performance in the graphics calculator class. On five objectives, a higher proportion of students demonstrated successful performance in the traditional algebra class. On two objectives, there was no statistically significant difference in student performance between the two types of courses.

THE METROPOLITAN COMMUNITY COLLEGES

Longview Community College
Maple Woods Community College
Penn Valley Community College

Initiative Title: General Education Assessment Initiative

Focus: Assessment of two of the college's general education initiatives—writing and critical thinking--through five funded projects distributed among the four campuses.

Results: *Reading for Results*

- High rate of inter-rater reliability (.81) for GenCat
- Average MCC CAAP score is 62, which falls at the 57th percentile of scores for similar students.
- Average MCC Watson-Glazer Critical Thinking Appraisal score is 25.7. This number is higher than equivalent scores for freshman English at a southeastern college and a southern university, but lower than scores for upper-division students at a four-year university.
- Critical thinking scores have improved, but the improved scores cannot be linked to classroom activities.

MINERAL AREA COLLEGE

Initiative Title: Critical Thinking with Writing Intensification and/or Collaborative Learning

Focus: Faculty developed critical thinking activities and then added either a writing or collaborative learning component.

Results:

- Mineral Area College students scored above the national average on the CAAP critical thinking test. Fifty-nine percent of the students responding to a survey of student attitudes indicated that their ability to think critically was enhanced by the critical thinking activities in the project.
- Using writing as a method of teaching critical thinking was a successful component of the program as judged by student responses to a survey using a Likert scale. Sixty-three percent of the students surveyed felt that their ability to think critically was enhanced by the writing component of the project.
- Faculty reported the collaborative learning strategy as a successful component of their projects. Eighty-seven percent of the students surveyed felt that their ability to think critically was enhanced by the collaborative learning component of the project.

MOBERLY AREA COMMUNITY COLLEGE

Initiative Title: Underlying Syntactic Knowledge in Grammar Instruction

Focus: Improving students' ability to write grammatically correct sentences by using Noguchi's techniques for employing underlying syntactic knowledge (USK) in the editing process.

Results:

- The average number of errors per essay declined from 13.26 to 5.37.
- The standard deviation fell from 13.11 to 4.39.
- Students had increased confidence in their writing ability, based on responses to pre- and post-surveys.
- Students felt that using the USK method had helped them with their grammar, based on responses to pre- and post-surveys.

NORTH CENTRAL MISSOURI COLLEGE

Initiative Title: Hallmarks of Excellence—Multicultural Awareness English I Program Evaluation Portfolio Project

Focus: Faculty submit a proposal to have their course designated as a Multicultural Awareness Course, making sure that the proposal includes a course syllabus with multicultural awareness activities identified, descriptions or copies of the multicultural awareness activities identified on the syllabus, a grade breakdown for the course showing a minimum of five hours work or ten percent of the course's grade coming from multicultural awareness activities. Expansion of the 1996 portfolio project with a goal of using the results with dual credit and outreach faculty.

Results:

- None. A locally developed Multicultural Awareness and Critical Thinking (1996-1997 Hallmark) essay question is to be developed. Beginning spring of 1999, graduates of NCMC will respond to these questions as part of the CAAP test. The results will be assessed locally.
- Faculty read and discussed portfolios as well as common concerns and examples of success. It is felt that a scientific, quantitative approach to the project is beyond the resources of the committee.

OZARKS TECHNICAL COMMUNITY COLLEGE

Initiative Title: Improving Student Learning Though the Use of Technology

Focus: Faculty encouraged to develop projects to enhance instruction and better meet the unique needs of their students. In addition, faculty are encouraged to use new technology to improve teaching and learning. Nine projects were approved.

Results:

- Seventy-two percent of students who experienced the use of data projectors reported it to be more effective than written instructions.
- Sixty-four percent of students using computer-assisted science labs reported that the labs were "very helpful" to them.
- One-hundred percent of students reported the self-paced activities helped them to meet the required competencies.
- Students in Office Systems Technology 200 courses increased their achievement (grades) by 20% the second half of the semester.

ST. CHARLES COUNTY COMMUNITY COLLEGE

Initiative Title: Developing Strategies for Incorporating Critical Thinking into Classwork and Assignments

Focus: Improving critical thinking skills of students by enriching classroom methodologies.

Results:

- Faculty members continued to become more aware of critical thinking resources on campus during 1997-98.
- Faculty members learning about critical thinking resources on the Internet.
- Nine faculty members attended regional and national workshops on critical thinking during 1997-98.
- Sixteen faculty, representing 12 disciplines, conducted projects during 1997-98, a net increase of two. Other faculty continue to use critical thinking exercises in their courses though they no longer participate in the group.
- Through meetings and a list serve, faculty members provided informal support for other faculty members working on course renovations.
- SCCCC post-45 hour students taking the ACT-CAAP critical thinking component in the spring of 1998 had a mean score of 62.2, which is a slight decrease over the previous year's 63.2 but is still above the national norm for two-year college sophomores of 61.3.

ST. LOUIS COMMUNITY COLLEGE

St. Louis Community College at Florissant Valley
St. Louis Community College at Forest Park
St. Louis Community College at Meramec

Initiative Titles: Improving Student Retention through Learning Communities
Supplemental Instruction Student Academic Achievement through Learning to Learn

Focus: 1) Addressing student success through collaboration among faculty counselors and support services personnel, through connections between instruction and support services, through possible enrollment in mathematics, English, and reading courses above placement test scores, and through emphasizing the affective domain. (Forest Park Campus)

2) Addressing the issues of student success and retention through the use of supplemental instruction. (Florissant Valley Campus)

3) Addressing student success through the use of supplemental instruction and through introducing contextualized learning theory and pedagogy into a linked General Psychology and English Composition I learning community. (Meramec Campus)

Results:

- Overall, FFR-LC (Funding for Results-Learning Communities) students, many of whom were in courses above their placement test scores, performed as well or better than non-FFR students who were in the courses in accordance with their placement test scores even though projected results were not obtained.
- While course withdrawal rates were generally higher for FFR-LC students than for non-FFR students, an examination of unsuccessful completion rates that include grades of D, F, PR, and W shows similarities between the two groups.
- FFR-LC students returned at a rate higher than other students.
- Students participating in supplemental instruction (SI) performed an average of 33 percent better than non-SI students.
- Students participating in SI withdrew an average of 21 percent less in the fall '97 and 19 percent less in spring '98 than non-SI students.
- In 11 of 19 sections during fall '97, the SI group out-performed the non-SI group by at least .50 grade.
- In 22 of 36 sections during spring '98, the SI group out-performed the non-SI by at least .50 grade.
- In the Elementary Algebra Study Skills Enhanced course, 31 percent of the students completed the course with a C or better.
- In the Elementary Algebra/Attached Mandatory Supplemental Instruction Study Skills Session, 39.2 percent of students completed the course with a C or better.
- In the Linked General Psychology and English Composition 101 courses, 57 percent of the students received a grade of C or better in both courses.

STATE FAIR COMMUNITY COLLEGE

Initiative Title: Instructional Technology Mini-Grant Pilot Project

Focus: Improving student success through methods that actively involve students through innovative strategies, including instructional technology.

Results

- Sent faculty to ITV training. Fifteen faculty involved in the training and six faculty will go on line this fall.
- Two hundred students having heard a professional writer/speaker on campus were required to write a paper on whether good writing skills create good speaking skills. One hundred seventy-three student essays reflected a positive connection. Nine student essays only saw a weak connection.
- Students involved in a global positioning system project in the biology department self-reported significant gains in skills relating to GPS/GPI, scientific gathering, data gathering and recording, software presentation, and soil data interpretation.

- Since the implementation of the computer-assisted instruction project in the ADN Department , students' pass rates on the state board exams have risen from 88 percent to 90 percent.
- As a result of multiple in-service workshops on the use of technology in the classroom, there has been an increase in the requests for technology in the classroom, from document projectors and laptops to wiring for classroom access to the Internet. In addition, a significant number of classes now require the use of the Internet in assigned projects.

THREE RIVERS COMMUNITY COLLEGE

Initiative Title: Improvement of Students' Skills in Humanities
Focus: Improving students' writing, reading, and oral communication skills.
Results:

- More than 85 % of the sections of English Composition I were taught in computer-assisted writing labs.
- Eight of ten English faculty used the technology in the writing lab for instruction.
- The percentage of students persisting to course completion increased by only 4 % over the previous year.
- At least 25 hours per week of tutoring assistance was documented.
- The comparison of ASSET scores and the results of the holistic scoring of writing prompts revealed no significant differences.
- The percentage of students receiving a grade of "C" or better in English composition increased by 8%.
- Research into the college's reading program has begun, but no recommendations have been made
- The percentage of students receiving a grade of "C" or better in speech communication increased by 12%.

SUMMARY OF
FFR CAMPUS TEACHING/LEARNING IMPROVEMENT PROJECTS

Four-Year Colleges
1997-1998

CENTRAL MISSOURI STATE UNIVERSITY

Initiative Title: Implementation of Central's Continuous Process Improvement Model (CPI)

Focus: Expansion of CPI model across campus into all academic departments and several academic support services areas

Results:

- All 34 academic departments and two academic support services units provided evidence of implementation of CPI at some level, an increase of two. Program participation within departments increased by 17, and in academic support services, by one.
- Successfully developed department funding resources to support continued implementation of CPI
- Continued development of local performance-based assessments for majors that are congruent with the program outcomes within departments.
- An increase of 131% in numbers of faculty attending instructional technology workshops.
- An increase from 7 to 12 in numbers of departments using nationally recognized major field tests.
- An increase from 53% to 63% of students scoring above the 50th percentile on nationally recognized major field tests.
- Unable to administer CPBA to entering freshmen and rising juniors as planned.

HARRIS-STOWE STATE COLLEGE

Initiative Title: Learning Through Teaching at Harris-Stowe State College: A Funding for Results Program

Focus: From possible activities which were designed to enhance teaching and learning and to address five programs' objectives, faculty self-selected activities in which they would engage.

Results:

- NTE preparation workshops have been conducted.
- Two faculty members attended an NTE preparation workshop to observe and experience NTE preparation.
- Of the 205 students who took the NTE Praxis Series 1997-98, 108, or 53%, passed.

LINCOLN UNIVERSITY

Initiative Title: Literacy and Learning

Focus: Improving students' writing skills, speaking and presentation skills using technology, and understanding and active engagement, using multimedia instruction, experience-based learning, and cooperative learning.

Results: ***Improve Students' Writing Skills***

- Increased number of student presenting original work at NULC by 175% (4 presented in 1997; 11 presented 1998).
- From 1997 to 1998, increased number of student submissions to new campus literary magazine by 66%, going from 73 submissions to 121.
- Seventy-five percent of students in an Eng. 101 class (pilot project) demonstrated proficiency in word processing and e-mail transmission.
- Fifty percent of students in an Eng. 101 class (pilot project) demonstrated ability to critique peers' drafts sent over e-mail.
- Fifty percent of students in an Eng. 101 class (pilot project) expressed belief that their writing had improved as a result of the e-mail peer review and revision process;
- Sixty-six percent of students' final papers demonstrated improvements (from beginning of the semester) in length and amount of detail.

Improve Students' Speaking and Presentation Skills Using Technology

- Twenty-three education majors made formal presentations off campus that have been evaluated and are available for teaching portfolios.
- Sixteen elementary education majors made presentations at the State Interface Conference for math and science.
- Seven special education majors presented at the International Conference for Exceptional Children in Minneapolis.
- Students videotaped themselves in classroom teaching situations and evaluated their performances in several methods classes.
- Seventy-four students were trained in use of technology for teaching and presentation.
- Seventy-five percent of students in the pilot group met most or all criteria listed in rubric for effective [PowerPoint] presentations.
- All presenters [in the pilot group] wrote self-evaluation reports which demonstrated understanding of their own strengths and areas needing improvement.
- Eighty-eight percent of students [in the pilot group] in an anonymous survey agreed that the PowerPoint presentation format helped them organize their lessons in a sequential manner.

Improve Student Understanding and Active Engagement Using Multimedia Instruction, Experience-based Learning, and Cooperative Learning

- Ninety-five percent of the course notes for Biology 103 have been converted to PowerPoint format.
- Before using multimedia in Biology 103, 83% of students passed; with the use of multimedia, 95.7% passed.
- In humanities there is an increased use of Internet resources. In the fall, 20% of students used Internet resources; during the spring, 60% of students used these resources.

Improved Attitudes toward Cooperative Learning

- In the pilot course Math 302, students were actively engaged in software applications and explored concepts to levels beyond instructor's expectations using "Sketchpad" computer software.
- Cooperative learning and problem solving using trapezoidal tables to facilitate communication during group activities.
- Ninety-five percent of students earned grades of "C" or better [in Math 302].
- Before participating in cooperative learning activities, 84% of students thought they learned math best by listening to the teacher; after participating, only 53% believed this.
- There was no change in students' belief about learning math best by discussing math concepts in small groups; 70% believed this before and after participating in cooperative learning activities.
- Field trips increased from 7% to 28% of class time in the Introductory Plant Science course.

Improvements in Student Achievement

- Improved scores in the Introductory to Plant Science course on written lab reports: first report 78%, last report 88%.
- Improved scores on higher-order thinking questions: first report 10%, last report 46%.
- Appropriate use of agricultural terms: first report 57%, last report 89%.
- Eighty-five percent passed with "C" or better (a 7% increase over previous class having no outside field trips).
- Students ranked value of field trips in helping them to understand the information provided in the course (an average score of 3.8 where 1= least valuable and 5= most valuable).

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MISSOURI SOUTHERN STATE COLLEGE

Initiative Title: Campus-Wide Effort to Study Good Practices in Undergraduate Education

Focus: Determining how the college is addressing the seven principles ["Seven Principles for Good Practice in Undergraduate Education,"] and formulating suggestions for future development and improvement.

Results:

- Seven Principles inventory administered to 1500 faculty, staff, and students; results shared with faculty, staff, and administrators.
- Seven focus groups evaluated inventory data and formulated strategies for improvement that were shared with faculty and staff.
- Eight Learning Communities were started during the fall and carried through in the spring.
- Retention of students participating in the Freshmen Learning Community (FLC) was higher than that of students in the control group for years 1995-1998.
- Eighteen teaching and learning workshops were conducted.
- Twenty-three technology-related workshops were conducted.
- Approximately 25 faculty attended regional and national professional development workshops and conferences.
- Sixteen proposals received funds in a competitive process.
- Two schools and two departments held retreats to discuss teaching and learning issues.
- Twenty-four "Brown Bag" sessions were held to discuss teaching and learning issues.

MISSOURI WESTERN STATE COLLEGE

Initiative Title: MSWC Campus-level Funding for Results

Focus: Promoting innovation through funding innovation in any aspect of the teaching/learning process. Fifty-one projects, which addressed one or more of six general objectives, were funded.

Results:

- The results are unique to each proposal; one example from each category is shown.
- Administration of pre- and post-tests revealed that students had indeed mastered the tools of CAR (Computer-Assisted Reporting).
- Mean scores of students' vocabulary and comprehension on the Nelson-Denny Reading exam showed statistically significant gains. No statistically significant gains were shown in student scores on the Task Four essay writing exam or the Task Four Critical Thinking Skills exam.
- Students made little or no use of mentors provided for them.

- Scores on the first two exams for the section where students prepared study guides were higher than in the other section. When the instructor prepared a study guide for the third exam for the control section, both sections had nearly equal scores.
- Students tripled the amount of writing completed; errors per page decreased by four per page. Writing generated exceeded 100 word-processed pages (the norm is 60 or more pages generated).
- Enrollment in class that incorporated multiculturalism increased 27.7% from the previous time the class was offered.

NORTHWEST MISSOURI STATE UNIVERSITY

Initiative Title: Seven-Step Planning Process

Focus: Foster planning that identifies who is served and their expectations, then write these expectations as outcomes which are validated by those served, finally show how these outcomes support the improvement of student learning. Funding is provided to campus-level projects that show good planning as well as potential for improving student learning. Report reflects documentation for 145 projects.

Results:

- Significant progress was made within the twenty-one departments, but the process has not been completed for every program within every department. Twenty-eight of the thirty-eight units in the service areas have made significant progress on using the planning process. Of the remaining ten, seven have begun to use the process and three have made no significant headway in using the process.
- Of projects initiated exploring the use of information technology, twelve "modularized learning" projects are being implemented this year after being piloted during the 1997-1998 academic year.
- Many major components of the existing information and analysis system have been redesigned, and most of the new system should come on line during the coming academic year.

SOUTHEAST MISSOURI STATE UNIVERSITY

Initiative Title: Enhancing Teaching and Learning

Focus: Funding strategic initiatives that have to do with enhancements in teaching and learning. Sixteen funded proposals.

Results:

- Increased use of the Writing Center via an on-line writing center.
- Improved student learning in Industrial Technology course via computer-based review sessions.
- Improvements in student reported attitude (survey data) via course home pages on the World Wide Web.
- Enhanced experiential learning of students via presentations at professional conferences.

- Increased student involvement in campus life via freshman interest groups in residence halls.
- Improved oral communications skills of student across the curriculum.
- Increased performance and retention of criminal justice majors.
- Improved instruction of underprepared students via University Preparatory Academy.
- Increased faculty and student usage of on-line research information to address University Studies Objective #1, Demonstrate the ability to locate and gather information.
- Faculty involvement in student orientation as a means to increase student retention.

SOUTHWEST MISSOURI STATE UNIVERSITY (Including West Plains Campus)

Initiative Title: Teaching/Learning Strategies for Student Success FFR (Springfield Campus) General Education (Springfield Campus) University Life (West Plains Campus)

Focus: 1) Encourage faculty to try innovative projects to improve teaching and learning at SMSU and to share the results with their colleagues. Twenty-four proposals were at least partially funded.(Springfield Campus)

2) Strengthen the general education curriculum and enhance the public affairs mission of SMSU through development of a required interdisciplinary capstone course, which focuses on public affairs issues. (Springfield Campus)

3) Develop a student success course. (West Plains Campus)

Results:

FFR (Springfield Campus)

- Encouraged faculty to submit proposals.
- Funded 24 proposals.
- Gathered results and share with colleagues.
- Improved teaching/learning

General Education (Springfield Campus)

- Fully funded five proposals and partially funded three proposals.
- Two or three faculty involved in each project.
- Anticipate creation of eight new sections of the capstone course.

University Life (West Plains Campus)

- Retention of first-time, full-time students from fall 1994 to fall 1995 was 45 %.
- Retention rate of first-time, full-time student from fall 1995 to fall 1996 was 58 %.
- The retention rate for first-time, full-time students from the fall 1996 to fall 1997 was 66%, which exceeded the projected rate of 58%.

TRUMAN STATE UNIVERSITY

Initiative Title: Funding for Results at Truman State University

Focus: Implementing the University's liberal arts and sciences mission by achieving excellence in the major, in the liberal arts and sciences objectives, and improving the liberal arts culture.

Results:

- The number of students achieving the 50th percentile on their nationally normed senior test increased by 0.3% over the base year (FY95) and by 5.5% over the FY97 results.
- The students achieving the 80th percentile on their nationally normed senior test increased by 2.7% over FY95 and by 3.4% over the last fiscal year.
- Discussions continue regarding improving senior test results.
- FY98 data show that 38% of Truman graduates went on to graduate or to professional schools, an increase over the 35.7% rate for FY96 graduates.
- An interdisciplinary, inter-rater reliability rate of 80% was achieved for the portfolio assessment project, a 3% decrease from 1995-96.
- Sixty-eight percent of the students awarded undergraduate degrees in FY98 submitted portfolios for assessment. This figure exceeded the 5% goal established with a 62.4% baseline in 1996.
- Responses from 1156 students to Graduating Student Questionnaire survey questions about the liberal arts and sciences mission revealed a positive change from the FY96 base for three of the six questions asked, but only one question, concerning attendance at cultural events, exceeded the 1% goal.
- Competitive grants to improve the liberal arts culture, Liberal Studies Program course development, and improvement in curriculum development and instruction were offered.
- Faculty were funded to enroll in core and other courses outside their disciplines.
- The 1997 Summer Planning Workshop, involving faculty, staff and students, focused on intensive discussions of topics to support academic linkages to the University Master Plan, 1997-2007, and implementation of the Liberal Studies Program.
- Held new faculty workshops to orient new colleagues to the liberal arts and sciences mission, discipline action plans, teaching and learning tools, and campus uses of assessment.
- Faculty Development Luncheon series provided a forum to discuss pertinent issues.
- Faculty and students were sent to, and presented at, the AAHE Assessment Forum.
- Faculty and students sent to the annual National Conference on Undergraduate Research meeting.

- The April 1998 Undergraduate Research Symposium involved 277 student presenters, the largest number in the program's history.
- Recently revised student interview project.

UNIVERSITY OF MISSOURI-COLUMBIA

Initiative Title: The Effects of Freshman Interest Groups, the Summer Transition Program, and the Learning Center on Students' Academic Success

Focus: Improvement of the quality of the undergraduate educational experience, providing students with a learning environment and support systems to increase academic success.

Results:

- Students in Freshman Interest Groups (FIGs) had substantially higher GPA (3.01) than did non-FIG students (2.84)
- Almost 88% of the FIG students completed 24 credit hours with a 2.00 GPA, compared to slightly less than 82% of the non-FIG students.
- Data regarding the use of the Learning Center will not be available until fall 1998 semester census date. Data from 1996 shows the Learning Center has a positive effect on student retention. Freshmen users were retained at an 86% rate while the rate for non-users was 68%. Retention of African American student-users of the Learning Center was 84%,while the rate for non-users was 50%.
- Data from the Residential Life House Environment Survey reveals that FIG students reported substantially higher levels of academic involvement in the residence hall, greater residential community involvement, and a more positive residence social atmosphere than did student in traditional residence halls.

UNIVERSITY OF MISSOURI-KANSAS CITY

Initiative Title: 1) Graduate Component—Reexamination of the residency requirement for Interdisciplinary Ph.D. students
2) Undergraduate Component—The Use of a First-Year Experience Course (Arts & Sciences 100) and Supplemental Instruction (SI) to enhance lower-division undergraduate education

Focus: 1) Improvement of graduate education through reexamining the residency requirement for interdisciplinary Ph.D. students
2) Improvement of undergraduate education by focusing on the use of a First-Year Experience Course (Arts & Sciences 100) and SI.

Results: ***Graduate Component***

- Doctoral students who received the initial innovative residency grants have now completed their residency years and used their grant funds for a variety of innovative activities, all of which promote residency objectives.

- Students who received the residency grants have all submitted reports on their residency experience. These experiences were summarized in an issue of the Doctoral Student Association Newsletter and are being complied into a booklet for distribution to other doctoral students and faculty.
- Results of an opinion survey on the residency experience, which was distributed to students in the interdisciplinary Ph.D. program, have been compiled into a report and reviewed by the Ph.D. Executive Committee.
- A focus group was formed among the eight recipients of the residency grants to share experiences and ideas.

Undergraduate Component

- Statistical and anecdotal evidence suggests that the project is improving teaching/learning. Faculty responses to training seminars are extremely positive.
- The seminars have contributed to renewed interest in teaching effectiveness, leading to a teaching conference to be held in 1998-99 that will draw on the resources of A&S faculty.
- Faculty in the project have also indicated a desire to teach future sections of First-Year Experience or an SI course; and several are in fact doing so again this fall.
- Of the students in the project, 92% finished the 1996-97 academic year eligible to re-enroll, and 80% were re-enrolled in fall 1997. The comparable eligibility and re-enrollment for first year students overall were 78% and 63%, respectively.
- Preliminary data available for 1997-98 indicate the project continues to impact students' academic achievement and persistence. For example, 93% of the students completing the First-Year Experience course in fall 1997 re-enrolled winter 1998, and 80% have declared majors.

UNIVERSITY OF MISSOURI-ROLLA

Initiative Title: EXCEL Workshop Program and Leadership Academy

Focus: Improved student retention and academic performance through the use of collaborative learning workshops, leadership courses, and facilitator training.

Results:

- Student retention after five semesters is 17% higher for EXCEL participants than for non-participants.
- Student grade point averages are 0.4 higher for EXCEL participants than for non-participants.
- A GPA increase is observed across all ACT levels.

UNIVERSITY OF MISSOURI-ST. LOUIS

Initiative Title: 1) Seamless Community College Transition Program
2) Supplemental Instruction (SI) Program
3) Freshmen Orientation/Study Skills Workshops

Focus: 1) Foster the inter-institutional meshing of academic content and prerequisites, as well as faculty cooperation, leading to greater numbers of students pursuing and succeeding in advanced courses.
2) Improving student knowledge and transferable learning skills, as measured by higher grades and greater retention.
3) Providing the critical prerequisite context of facts and skills necessary for a successful learning experience at the university level.

Results: ***Community College Transition***

- Meetings between faculties and between advising units on articulation issues, ongoing or arranged.
- Exchange of information by flyer, course syllabi, and articulation booklets.
- Faculty service on community college advisor boards.
- Negotiations on joint initiatives regarding field trips and sponsoring speakers.
- Joint participation at UM-St. Louis in national teleconferences.
- For students who enrolled at FY96, the target group has a two-year graduation rate of 11.3% as compared to 8.9% for the non-target group.
- For students who enrolled through the '96 fall semester, the target retention rate is 67.6% as compared to the non-target rate of 59.2%.
- For students who enrolled through the '97 fall semester, the target re-enrollment rate is 79.6% as compared to the non-target rate of 70.7%.
- For students who enrolled through the '98 winter semester, the target success rate is 74.9% as compared to the non-target rate of 73.2%.

Supplemental Instruction

- Data from 12 sections show that SI students had course grade averages of 2.408 compared to 1.704 for non-SI students.
- For almost every class, SI students had, as a group, a higher percentage of As and Bs and a lower percentage of Ds, Fs, and Ws.

Orientation/Study Skills Workshops

- The number of workshop sections was increased from four in FS96, serving 92 students, to ten in FS97 and two in WS98, serving 211 students.
- Student success (GPA≥ 2.0) directly correlates with the number of times a student attends a workshop.

- Students attending nine or more times succeed at a 76% rate compared to 24% for students who attended from one to eight workshops.
- Community college staff participated in an UM-St. Louis-sponsored teleconference on the future of student success courses by David Ellis.

ATTACHMENT B

Table 1
Number(s) of Teaching/Learning Project(s) Funded by Institutions

Table 2
Anticipated Results in FFR Projects

Table 3
Learning Skills in FFR Projects

Table 4
Teaching/Learning Strategies in FFR Projects

Table 1
Number(s) of Teaching/Learning Project(s) Funded by Institutions
1997-1998 FFR Accountability Reports

More than Three	Two to Three	One
Central Missouri State University Harris-Stowe State College Lincoln University Missouri Southern State College Missouri Western State College Northwest Missouri State University Southeast Missouri State University Southwest Missouri State University Truman State University University of Missouri-Columbia University of Missouri-Kansas City University of Missouri-Rolla University of Missouri-St. Louis		
The Metropolitan Community Colleges (3 Campuses) Mineral Area College Ozarks Technical Community College St. Charles County Community College St. Louis Community College at Forest Park St. Louis Community College at Meramec Three Rivers Community College	Jefferson College North Central Missouri College,	Crowder College East Central College Moberly Area Community College St. Louis Community College at Florissant Valley State Fair Community College

Table 2
Anticipated Results in FFR Projects
1997-1998 FFR Accountability Reports

Improved Retention	**Increased GPA**	**Enhanced Skills/Performance**	**Internalized Positive Attitudes**	**Other**
Missouri Southern Northwest Southeast Southwest -West Plains UM-Columbia UM-Kansas City UM-Rolla UM-St. Louis	Missouri Southern Missouri Western UM-Columbia UM-St. Louis	Central Harris-Stowe Lincoln Missouri Western Northwest Southeast Southwest Truman UM-Columbia UM-Kansas City UM-Rolla UM-St. Louis)	Harris-Stowe Lincoln Missouri Southern Missouri Western Southeast Southwest UM-Kansas City	Missouri Southern (Increased awareness and application of Seven Principles) Southeast (Enhanced experiential learning through presentations at conferences, increased involvement in campus life) Truman (Maintain the number of graduates going on to graduate school) UM-Columbia (Greater success in hours completed; greater campus involvement) UM-Kansas City (Doctoral students have completed residency years, submitted reports, participated in focus groups) UM-St. Louis (Community College students graduation rates)
Crowder East Central Jefferson Metropolitan (3 Campuses) St. Louis (3 Campuses)	East Central Jefferson Metropolitan (3 Campuses) Three Rivers	Crowder Jefferson Metropolitan (3 Campuses) Mineral Area Moberly Area North Central Ozarks Technical St. Charles County St. Louis (3 Campuses) State Fair Three Rivers	Jefferson Three Rivers	Crowder (Increased time revising writing; soliciting peer critiques) Jefferson (Students approach learning in new ways) Mineral Area (Increase number of students in project) Metropolitan (Create formal feedback loop, improving writing and critical thinking) Ozarks Technical (Provide students 'hard experience' to enhance application of knowledge) State Fair (Introduce students to innovative technologies, GPS/GPI) Three Rivers (greater persistence to course completion)

Table 3
Learning Skills in FFR Projects
1997-1998 FFR Accountability Reports

Reading	Writing	Math	Speaking and/or Presentations	Critical Thinking	Technology	Other
Central UM-Columbia	Central Lincoln Missouri Western Northwest Southeast Southwest UM-Columbia UM-Kansas City	Central Northwest Southeast Southwest UM-Columbia	Central Lincoln Northwest Southeast Truman	Central Northwest UM-Kansas City	Central Harris-Stowe Lincoln Missouri Western Northwest Southeast Southwest UM-Columbia	Northwest (analyze and interpret musical works; listening competencies) Southeast (science techniques facility and reasoning; nursing clinical techniques and assessment skills) Truman (portfolio representing 26 academic disciplines; interdisciplinary thinking) UM-Columbia (science; library skills) UM-Kansas City (Freshman Year Experience; Supplemental Instruction) UM-Rolla (cooperative learning; leadership) UM-St. Louis (study skills; Supplemental Instruction; inter-institution cooperation)
Jefferson St. Louis (1 Campus) Three Rivers	Crowder Mineral Area Metropolitan Moberly Area North Central Ozarks Technical St. Louis (2 Campuses) State Fair Three Rivers	Jefferson St. Louis (3 Campuses)	Three Rivers	Mineral Area Metropolitan St. Charles County	Crowder Jefferson Metropolitan Ozarks Technical State Fair Three Rivers	North Central (reading and interpreting maps) St. Louis (science reasoning, 1 Campus)

Table 4
Teaching/Learning Strategies in FFR Projects
1997-1998 FFR Accountability Reports

Supplemental Instruction	Learning Community	Collaborative Learning and/or Workshop	Technology	Learning Lab/Center	Other
Central UM-Kansas City UM-St. Louis	Missouri Southern	Central Missouri Western Lincoln-cooperative learning UM-Kansas City UM-Rolla	Central Harris-Stowe Lincoln Missouri Western Northwest Southeast Southwest	UM-Columbia	Central (performance-based assessment) Harris-Stowe (modules, nationally normed exams, authentic assessment) Lincoln (presentations at conferences; experience-based learning; literary magazine) Missouri Southern (professional development workshops; departmental retreats, values forums, brown-bag series) Missouri Western (pre- and post-test; active learning; team teaching; freshman seminar) Northwest (English department colloquium; literature conference; modular learning; public history conference; Suzuki flute teacher-training; professional development training) Southeast (freshman interest groups; student presentations at professional conferences) Southwest (capstone course; University Life, a freshman seminar course) Truman-nationally (normed exams; portfolio; faculty development luncheon series; workshops; conferences) UM-Columbia (FIG; survey; summer transition program; group tutoring) UM-Kansas City (survey; focus group; training seminars; freshman-year experience, a course) UM-St. Louis (Community College Transition; freshman orientation/study skills)
East Central St. Louis (3 Campuses)	Metropolitan (3 Campuses) St. Louis (2 Campuses)	Mineral Area	Crowder Jefferson Metropolitan (3 Campuses) Ozarks St. Charles County State Fair Three Rivers	Ozarks-computer-assisted labs for science Three Rivers	Crowder (written feedback, peer critique) Jefferson (reading intervention logs) Mineral Area (nationally normed exam; writing intensification; writing to improve critical thinking; critical thinking as a teaching method) Metropolitan (portfolio project; nationally normed exam; locally developed writing/critical thinking assessment instrument; assessment center; pre- and post-test) Moberly Area (Noguchi method, USK) North Central (portfolio project) Ozarks-self-paced learning activities St. Charles County-(regional/national workshops; nationally normed exam) St. Louis (team teaching; peer counseling; linked course) State Fair (inservice workshops and training) Three Rivers (holistic scoring; WRITE Conference)

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